Alabama Course of Study for Mathematics Standards Practice Workbook

GRADE 3

Standards Practice

Practice Tests

enVision® Mathematics

Alabama

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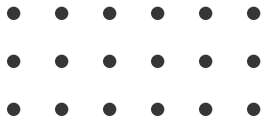
1 19

Contents

Name _____

1. Match the array with the correct multiplication expression.



Ⓐ 8×1

Ⓑ 6×4

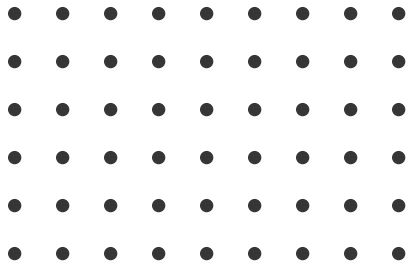
Ⓒ 3×6

Ⓓ 3×8

2. Show the repeated addition for 9 groups of 3 in an expression.

3. Draw an array to match the expression 8×6.

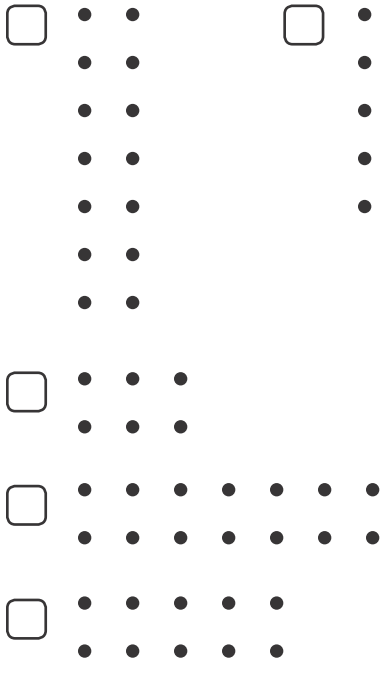
4. Count the number of dots and give a multiplication expression.



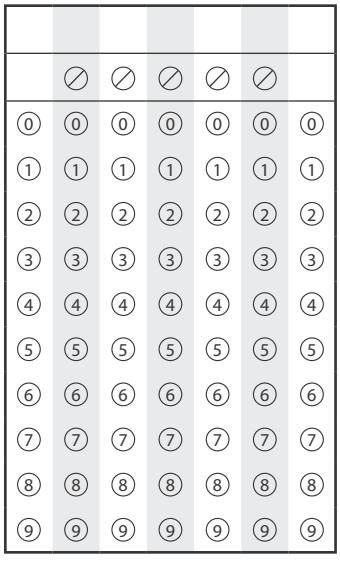
_____ × _____

5. Hailey has 6 photo albums and each album has 7 pictures inside. How many pictures does she have altogether?

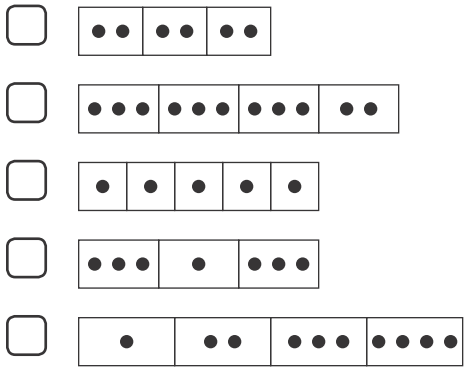
6. Which 2 arrays represent the same multiplication expression?



7. A stock clerk at a grocery store needs to set up 8 display tables with 10 boxes on each table. What is the total number of boxes needed?



8. Select all the pictures that represent a multiplication expression.



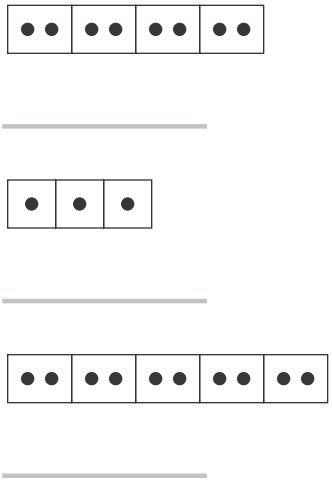
9. Write a multiplication expression that is equal to each addition sentence.

$7 + 7 + 7 + 7 + 7 =$

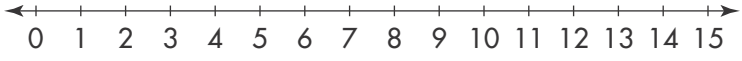
$1 + 1 + 1 + 1 + 1 + 1 =$

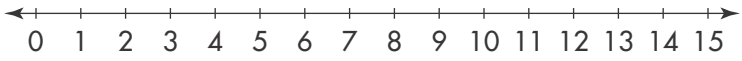
$5 + 5 + 5 + 5 =$

10. Write a multiplication expression for each picture.



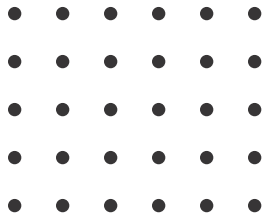
11. Show 2 different ways to skip count from 0 to 15. Write the multiplication fact for each way.





Name _____

1. Draw circles to divide 30 marbles evenly between 10 people.

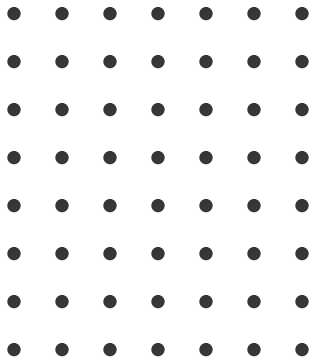


2. How much money would 4 children each receive if they divide $20 evenly?

3. Draw groups of dots to match the expression 24 divided by 6.

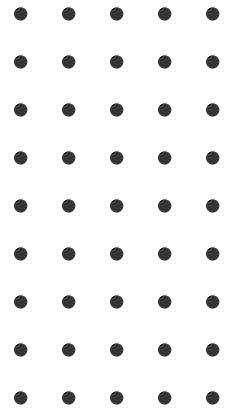
4. There are 36 girls who want to play baseball. If they need 9 players on each team, how many teams can they make?

5. Draw circles to divide the array into 7 equal groups.



6. Count the number of dots and write a division expression to represent the array.

7. Can 45 flowers be shared evenly between 6 friends? Use the array to explain.



8. Write a related division equation for each subtraction expression.

54 − 9 − 9 − 9 − 9 − 9 − 9

☐ ÷ ☐ = ☐

28 − 7 − 7 − 7 − 7

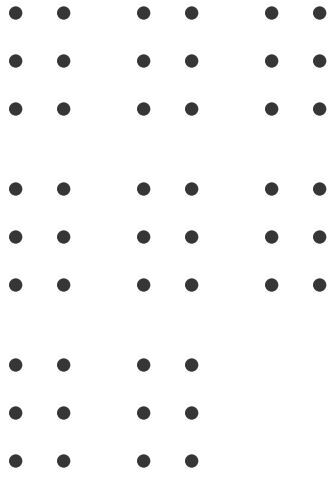
☐ ÷ ☐ = ☐

44 − 11 − 11 − 11 − 11

☐ ÷ ☐ = ☐

9. Draw an array to match the expression 32 ÷ 8.

10. What division expression represents the array shown?



Ⓐ 8 ÷ 6

Ⓑ 48 ÷ 6

Ⓒ 6 ÷ 48

Ⓓ 6 ÷ 8

11. Show two ways to divide 18 on a bar diagram.

Name _____

1. What is the pattern rule for changing the numbers in the first column to the numbers in the second column using multiplication?

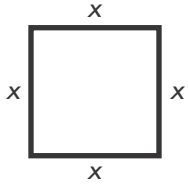
2	6
3	9
4	12
5	15
6	18
7	21

Pattern Rule = _____

2. Melissa has 81 blueberries. She is putting 9 blueberries in each bag. How many bags will she fill?

$81 \div a = 9$

3. Tara has a backyard that is fenced in on all 4 sides. The perimeter of her backyard is 96 meters. What is the length of each side?



$96 \div 4 = x$

4. Jackson won 30 balloons at the school fair. He divides his balloons equally between himself, his brother, and his sister. How many balloons will each of them receive? Write an equation to show your answer.

5. What is the pattern rule for changing the numbers in the first column to the numbers in the second column using division?

64	8
56	7
48	6
40	5
32	4
24	3

Pattern Rule = _____

6. Stella was practicing to run a full marathon. She ran 12 days in a row for 6 miles each day. How many miles did Stella run altogether?

Which equation could you use to solve the problem?

Ⓐ $12 \div 6 = r$

Ⓑ $r \div 6 = 12$

Ⓒ $12 \times 6 = r$

Ⓓ $r \times 6 = 12$

---

7. Steven has $48. He wants to divide the money equally to buy one gift for each of his 6 friends. Which equation can he use to find how much money he can spend on each gift?

Ⓐ $48 \div a = 6$

Ⓑ $48 \times 6 = a$

Ⓒ $a \div 48 = 6$

Ⓓ $48 \div 6 = a$

---

8. Thomas collected 56 baseball cards. He has divided them equally by placing 7 cards in each photo album. How many photo albums does Thomas have? Write an equation to show your answer.

9. Evan has 24 tomato seeds to plant in his garden. If he plants 4 seeds in each row, how many rows will Evan have? Which picture represents this situation?

Ⓐ 

Ⓑ

Ⓒ 

Ⓓ 

---

10. Magda takes her dog for a walk. Each block has 6 houses on it, and she walks 8 blocks in all. How many houses does she walk past?

	⊘	⊘	⊘	⊘	⊘	
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

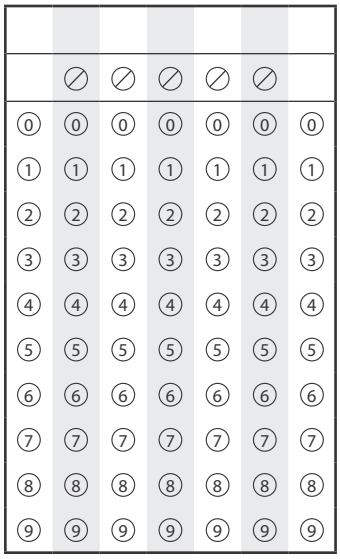
Name _____

1. What number will make all of the following equations true?

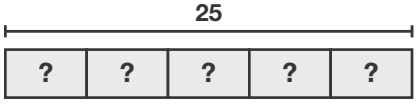
$? \times 9 = 81$

$63 \div 7 = ?$

$45 \div ? = 5$



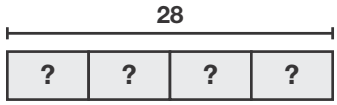
2. Diane drew the bar diagram shown. Select all the equations that could be used to represent the problem shown in the diagram.



- ☐ $25 \times ? = ?$
- ☐ $25 \div 5 = ?$
- ☐ $5 \times ? = 25$
- ☐ $? \times 5 = 25$
- ☐ $5 \div 25 = ?$

Write the missing number. _____

3. Brenda drew this bar diagram to model a division problem. Write a multiplication equation she can use to help find the missing number. What is the missing number?



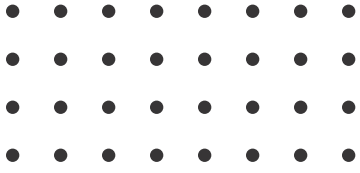
4. Brent has 5 pages for cards in his album. Each page holds the same number of cards. Brent has 40 cards in his collection. He places all of his cards on the pages. How many cards does each page hold? Write a multiplication equation for the problem.

5. Select all equations for which the missing number is 3.

- ☐ $6 \times ? = 18$
- ☐ $? \div 1 = 3$
- ☐ $3 \times ? = 6$
- ☐ $23 \div ? = 7$
- ☐ $7 \times 3 = ?$

6. Jayna plays a game with 3 friends. They use 28 counters in the game. If each player has the same number of counters, how many counters does each player have? Write a multiplication equation for the problem.

7. Select all the equations that are represented by the figure.



- ☐ $4 \times 8 = 32$
- ☐ $32 \div 4 = 8$
- ☐ $8 \times 3 = 32$
- ☐ $8 \times 4 = 32$
- ☐ $32 \div 8 = 8$

8. Complete the missing information in the multiplication table.

×		3		8
2	2		12	
		9	18	24
5	5		30	
		27		72

9. Complete the missing information in each row of the equation table.

	×	7	=	35
24	÷		=	6
6	×		=	48
49	÷		=	7

10. Ava is setting the table. She puts a plate and a bowl at each seat. Some friends are coming for dinner. She lays out 8 dishes in all at the seats for her friends. There are 5 seats for the family. How many friends are coming to dinner? How many dishes are on the table in all? Explain your answer.

11. Christie says that 3 is the mystery number in the equation $9 \times ? = 18$. Is she right? Explain your answer.

Name _____

1. Write the numbers that make this equation true.

$6 \times \left(2 \times \square\right) = \left(6 \times \square\right) \times 7$

2. Look at the products in the table. What pattern do you see? Explain why this pattern is always true.

×	0	1	2	3	4	5
1	0	1	2	3	4	5

3. Fill in the blanks to complete the equations.

If $8 \times \square = 72$ then $72 \div 8 = \square$.

4. Erica knows that $2 \times 5 = 10$ and $2 \times 7 = 14$. How can she use these facts to solve 2×12?

5. Select all the expressions that can help you solve 4×9.

- ☐ $(4 \times 3) + (4 \times 3)$
- ☐ $(2 \times 2) + (3 \times 3)$
- ☐ $(4 \times 5) + (4 \times 4)$
- ☐ $2 \times (2 \times 9)$
- ☐ 9×4

6. Part A

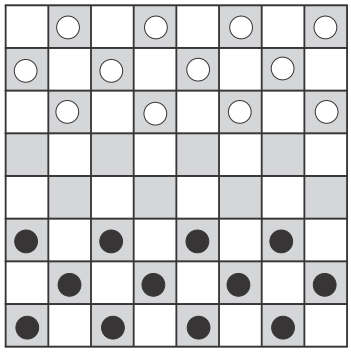
Fill in the missing factors and products in the multiplication table.

×		4	
2	4		
	8		24
6			36

Part B

What pattern do you see in the shaded row and column? Explain.

7. Cindy has set up a board as shown to play checkers with a friend.



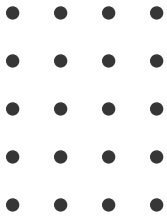
Part A

Write a multiplication expression for the total number of checkers on the board.

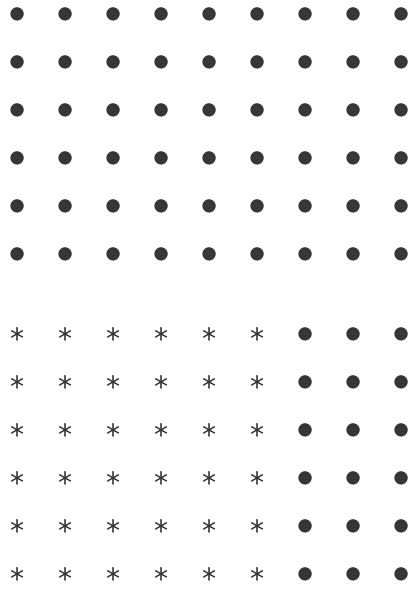
Part B

Cindy sets up a second checkerboard for two more friends. Write two different equations she could use to find the total number of checkers on both boards using the Associative Property. Solve the equations. Explain.

8. Draw an array that demonstrates the Commutative Property based on the array shown.



9. Write a multiplication equation to represent the relationship between the two arrays shown. Identify the property of multiplication represented.



10. The city has a new train with 5 passenger cars. Each car has 10 rows of 4 seats each. How many passengers can ride the train? Write an expression to explain.

Name _____

1. Justin has 63 stickers to share equally between 7 people. How many stickers does each person get? Write an equation to solve this problem without division.

2. Peter has not learned division yet, but he knows multiplication facts. Rewrite each of the equations in the table using multiplication, and help him to solve them.

Division	Multiplication	Answer
$56 \div 7 = ?$		
$81 \div 9 = ?$		
$21 \div 7 = ?$		
$15 \div 3 = ?$		

3. Which division equation could be solved using $4 \times ? = 36$?

Ⓐ $36 \div 8 = ?$

Ⓑ $4 \div ? = 36$

Ⓒ $36 \div 2 = ?$

Ⓓ $36 \div 4 = ?$

4. Which expression can help you divide $56 \div 7$?

Ⓐ 6×7

Ⓑ 7×7

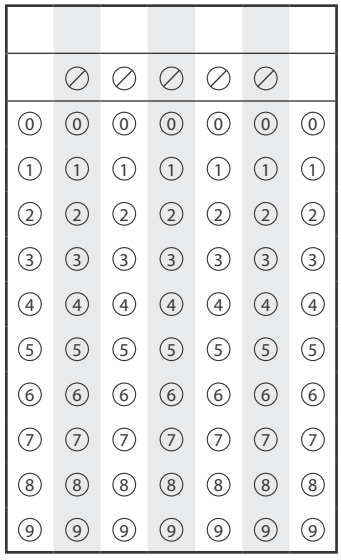
Ⓒ 8×7

Ⓓ 9×7

5. Ginny hits 48 balls to 6 players at tennis practice. She hits the same number of balls to each player. How many balls does she hit to each player? Select all the equations that can help solve this problem.

- ☐ $6 \times ? = 48$
- ☐ $48 \div ? = 6$
- ☐ $? \times 6 = 48$
- ☐ $48 \div 6 = ?$
- ☐ $48 \times 6 = ?$

6. What number multiplied by 6 is 36?



7. Select all the equations that are related to $12 \div 4 = ?$.

- ☐ $? \times 4 = 12$
- ☐ $12 \div ? = 4$
- ☐ $4 \div 12 = ?$
- ☐ $2 \times ? = 12$
- ☐ $4 \times ? = 12$

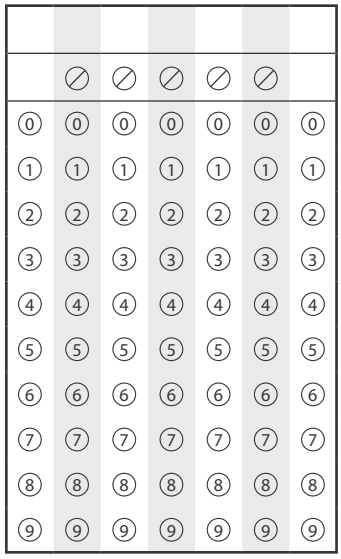
8. Use the multiplication table to find a fact related to $24 \div 8$. Draw a square around the factor you know. Draw a triangle around the product. Circle the missing factor. Then complete the equation.

x	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9
4	4	8	12
5	5	10	15
6	6	12	18
7	7	14	21
8	8	16	24
9	9	18	27
10	10	20	30

$24 \div 8 =$ ☐

9. Meg and four of her friends have 25 pages of paper. If they divide them equally between the five friends, how many pages does each of them get? Write a multiplication equation and solve for the missing factor.

10. What number multiplied by 7 is 49?



11. Draw an array showing the multiplication expression related to $24 \div 6$, to solve for the missing factor. Draw rectangles around the division groupings.

Name _____

1. What is the product of 7 and 5? Write an equation to solve the problem.

2. What is the number missing from this multiplication table?

×	6	7
4	24	?
5	30	35

Ⓐ 25

Ⓑ 28

Ⓒ 35

Ⓓ 38

3. Write and solve a division story for 40 ÷ 5.

4. Find 27 ÷ 3. Draw a bar diagram to represent the problem.

5. Match each equation to the product or quotient that solves it.

	30	6	18	10
5 × 6 = ?				
30 ÷ 3 = ?				
3 × 6 = ?				
48 ÷ 8 = ?				

6. Which division equation could be used to solve 9 × ? = 54.

Ⓐ 54 ÷ 8 = ?

Ⓑ 54 ÷ 7 = ?

Ⓒ 9 ÷ ? = 54

Ⓓ 54 ÷ 9 = ?

7. Select all of the numbers that can divide 20 into equal parts.

- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 8

8. Find the product of 4 and 8.

9. Multiply.

$8 \times 3 = ?$

10. Choose the way to solve 6×7.

Ⓐ Use the Distributive Property: $(3 \times 7) + (3 \times 7)$.

Ⓑ Use repeated addition: $6 + 6 + 6 + 7 + 7 + 7$.

Ⓒ Look at the multiplication table. Find the 6s row. Go across until you find 7. The product is the number at the top of that column, 7.

Ⓓ Use the Identity Property: $(1 \times 6) + (1 \times 5)$

11. Look at these two expressions.

$48 \div 6 \square 60 \div 6$

Part A

Explain how you can use what you see to compare the expressions without finding the two quotients. Then, write the correct symbol $<, =, >$ in the box above.

Part B

Check your answer by finding both quotients. Write the quotients and the correct symbol $<, =, >$ below.

12. Find the product.

2×7

Ⓐ 7

Ⓑ 9

Ⓒ 4

Ⓓ 14

Name _____

1. Mr. Larson worked 5 days during the week. On each work day, he spent $8 on lunch. On Sunday, he spent $55 on lunch for his family. How much did he spend in all on lunches?

2. Mac planted his garden. He planted 7 rows with 6 plants in each row on Saturday. He planted 25 plants on Monday. He wants to know how many more plants he planted on Saturday than on Monday.

Choose the correct operations to represent this problem using equations. Write the symbols for the operations on the lines in the equations.

$7 \_\_\_\_\_ 6 = p$

$p \_\_\_\_\_ 25 = d$

$+ \quad - \quad \times \quad \div$

3. Amanda sweeps the kitchen floor 6 times a month. She sweeps her bedroom floor 2 times a month. How many times does she sweep the floor in 4 months?

Ⓐ 24

Ⓑ 8

Ⓒ 26

Ⓓ 32

4. Grades 2 and 3 have 362 pencils in their supply in all. Grade 3 uses 117 pencils in the year. Grade 2 uses 156 in the year. Benita wants to find how many pencils are left. She says that Grades 2 and 3 used 273 pencils in all, and that 245 pencils are left. Is her answer reasonable? Explain.

5. Carter's club is selling note cards. There are 8 cards in each pack. Each of his 3 aunts buys 2 packs of cards. Write equations to find the total number of cards his aunts buy.

6. Meana wants to sell 145 bracelets. She sells 7 bracelets a month for 3 months. Select all of the good estimates for how many more bracelets Meana needs to sell to reach her goal.

- ☐ 125
- ☐ 100
- ☐ 110
- ☐ 120

7. Larry collects cans to recycle. His goal is to collect 300 cans. One month, he collected 176 cans and the next month, he collected 85 cans. How many more cans does Larry need to collect? Use a letter to represent each unknown quantity, and write equations to solve.

8. Helena earns $3 for each garden she weeds. Sierra earns $6 per hour cutting grass. How many gardens does Helena need to weed to earn the same amount that Sierra earns for 4 hours of cutting grass?

Ⓐ 4

Ⓑ 6

Ⓒ 8

Ⓓ 10

9. Terry has $26. He needs to buy 5 packages of colored paper. Each package costs $5. He wants to know if he has enough money. He thinks, "5 times $5 is $25. I have more than enough money." Is Terry correct? Select the best answer.

Ⓐ Yes, he has $1 more than he needs.

Ⓑ No, he does not have more than enough money. The exact cost of the paper is $26. He has exactly the amount of money he needs.

Ⓒ No, he does not have more than enough money. The exact cost of the paper is $30. He does not have enough money for the paper.

Ⓓ None of the above are correct.

Name _____

1. Lara says that when any number between 1 and 9 is multiplied by 6, the product is even. Is this reasonable? Explain.

2. When multiplying any number by 10, what is true about the digit in the ones places of the product?

3. If a group of objects is divided into 2 equal groups and 1 is left over, is the total number of objects even or odd? What could the total number of objects be? Use a drawing to explain.

4. Look at the shaded rows of the table. What pattern do you see? Explain the pattern you found.

×	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8
2	0	2	4	6	8	10	12	14	16
3	0	3	6	9	12	15	18	21	24
4	0	4	8	12	16	20	24	28	32

5. Look at the products in the second unshaded row of the table above. Look at the factors. What pattern do you see? Explain why this pattern is always true.

6. Part A

Richard wrote 3 true statements about even and odd numbers. Select all of the true statements.

- ☐ An even numbers times an odd number has an even product.
- ☐ All odd numbers are multiples of 2.
- ☐ The product of 4 and any number is always even.
- ☐ The product of two even numbers is even.
- ☐ When an odd number is divided by 2 there are none left over.

Part B

Look at the statements you did NOT select in Part A. For each, give an example of why it is not true.

7. Part A

Jerome divided his basketball card collection into 2 equal groups. There were no cards left over. Describe what you know about the number of cards Jerome has.

Ⓐ It is an even number.

Ⓑ It is an odd number.

Ⓒ It is a multiple of 3.

Ⓓ It is a multiple of 5.

Part B

Jerome finds 1 more basketball card. Select all statements that must be true now.

- ☐ Jerome has an even number of cards.
- ☐ Jerome has an odd number of cards.
- ☐ Jerome can now divide all of the cards into 2 equal groups with 1 card left over.
- ☐ Jerome can now divide all of the cards into 2 equal groups with 0 cards left over.
- ☐ Jerome can now divide all of the cards into 3 equal groups with 0 cards left over.

Name _____

1. Round 745 to the nearest ten and the nearest hundred.

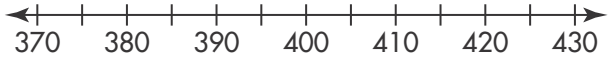
2. Match each number on the left to the number that shows rounding to the nearest hundred.

	200	300	500	800
531	❒	❒	❒	❒
212	❒	❒	❒	❒
778	❒	❒	❒	❒
255	❒	❒	❒	❒

3. Use the values in the table.

A	393
B	428
C	375
D	412

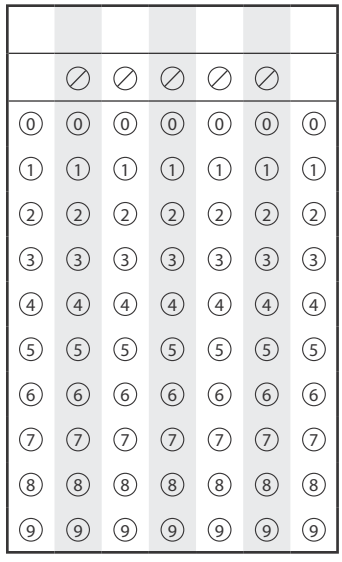
Write the letters A, B, C, and D above the number line to show each number rounded to the nearest ten.



4. Julia rounds a mystery number to the nearest ten and gets 500. Caroline rounds the same mystery number to the nearest hundred and gets 500. Select all possible answers that can be the mystery number.

- ☐ 492
- ☐ 499
- ☐ 503
- ☐ 506
- ☐ 494

5. A number was rounded to the nearest ten and the result was 220. What is the smallest value the number could be?



6. Round each number to the nearest ten.

2	
42	
86	
595	
3,014	

7. Which of the following is equal to 600 when rounded to the nearest hundred? Select all that apply.

- ☐ 664
- ☐ 542
- ☐ 637
- ☐ 650
- ☐ 551

8. Round 4,992 to the nearest ten and hundred.

9. A mystery number rounded to the nearest ten is 1,570. What are the smallest and largest values for the mystery number?

10. Select all the numbers that have the same result when rounded to the nearest ten as when rounded to the nearest hundred.

- ☐ 5,997
- ☐ 704
- ☐ 555
- ☐ 105
- ☐ 2,896

11. Round each number to the nearest hundred.

8,965	
655	
103	
1,423	
47	

12. A number was rounded to the nearest hundred and the result was 800. What is the largest value the number could be?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

Name _____

Alabama Course of Study for Mathematics Standards Practice
3.11

1. Becky has $383 in her checking account. She has $520 in her saving account. How much money does she have in both accounts?

2. Select all the problems whose result is 300 when rounded to the nearest hundred.

- ☐ $233 + 107 - 7$
- ☐ $315 - 170 + 170$
- ☐ $299 + 51 + 1$
- ☐ $737 - 437 - 51$
- ☐ $356 + 207 - 175$

3. Solve $459 + 267$.

	∅	∅	∅	∅	∅	
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

4. What is the result of $596 - 50 + 4$? Explain your strategy.

5. Solve $900 - 243$.

	∅	∅	∅	∅	∅	
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

6. How can you check the answer for $456 + 327 = 783$?

I. Subtract $783 - 456 = 327$.

II. Subtract $783 - 327 = 456$.

III. Add $460 + 330 = 790$.

Ⓐ I and II

Ⓑ I and III

Ⓒ II and III

Ⓓ I, II, and III

7. To subtract 214 from 737 mentally, first subtract 14 from 214 to get 200. What is the next step? What is the difference?

Ⓐ Add 200 to 737.
The difference is 937.

Ⓑ Add 14 to 737.
The difference is 537.

Ⓒ Subtract 200 from 737.
The difference is 537.

Ⓓ Subtract 14 from 737. The difference is 523.

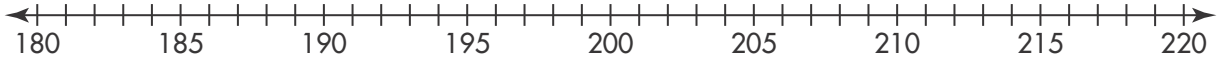
8. Select all the equations that are true.

- ☐ $203 + 370 = 370 + 203$
- ☐ $78 + 0 = 78$
- ☐ $(300 + 30) + 33 = 330 + (30 + 33)$
- ☐ $98 + (5 + 112) = (98 + 5) + 112$
- ☐ $98 + 67 + 2 = 100 + 69$

9. What addition equation can be used to check the answer for $587 - 361 = 226$? Draw a bar diagram to show how the numbers in this problem are related.

10. An office supply company made 487 pencils and 158 erasers. They need the same number of each to make school kits. Use mental math to find how many more erasers the company needs.

11. Solve $182 + 28$ and show your work on the number line.



Name _____

1. Jackson gives each of his 8 friends a bucket of marbles. Each bucket holds 40 marbles. How many marbles can the buckets hold in all?

2. Use properties of multiplication to show why $5 \times 60 = 10 \times 30$.

3. Select all the expressions that are equivalent to 9×40.

- ☐ 4×90
- ☐ $(9 \times 4) \times 10$
- ☐ 90×40
- ☐ $(9 + 4) \times 10$
- ☐ $4 \times (9 + 10)$

4. Melissa earns $30 each week for walking a dog. How much does Melissa earn for walking a dog for 5 weeks? Use the number line to solve the problem.

5. Select all the expressions that are equivalent to 6×90.

- ☐ 69×10
- ☐ 54×10
- ☐ 15×10
- ☐ $9 \times (6 \times 10)$
- ☐ $(3 \times 18) \times 10$

6. Anna bakes 60 muffins a day. How many muffins does she bake in a week?

7. What is 6×80?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

8. How can you use 5 × 7 to solve 50 × 7?

9. Match each expression on the left to an equal expression at the top.

	49 × 10	40 × 10	56 × 10	35 × 10
5 × 70	❒	❒	❒	❒
7 × 70	❒	❒	❒	❒
5 × 80	❒	❒	❒	❒
7 × 80	❒	❒	❒	❒

10. What is 20 × 9?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

11. Paul receives $5 a week in allowance. If he saves his money for 20 weeks, how much will he have at the end?

12. Elaine is making a quilt and bought 4 fabric packs. Each pack has 50 squares in it. How many squares did Elaine buy? Explain your solution.

13. Write each expression from the list below in the correct column to show expressions equivalent to 4 × 30, 4 × 40, and 3 × 60.

4 × 30	4 × 40	3 × 60

2 × 60

(3 × 6) × 10

16 × 10

(2 × 8) × 10

(9 × 2) × 10

6 × (2 × 10)

8 × 20

3 × 40

2 × (9 × 10)

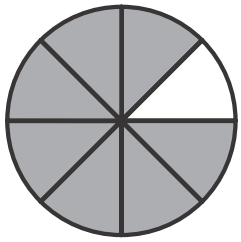
6 × 30

(4 × 4) × 10

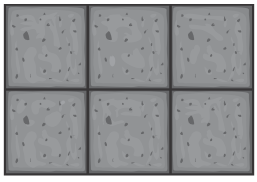
(4 × 3) × 10

Name _____

1. What fraction of the whole is gray? What fraction of the whole is white?



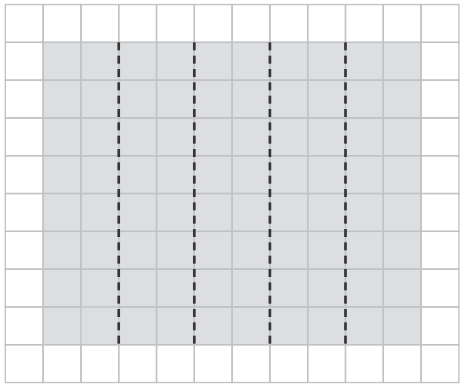
2. Write a fraction to name the equal parts of the whole oat-bar pan. How many parts would you need to make two whole pans of oat bars? Explain.



3. In Emily's bead collection, $\frac{1}{3}$ of her beads are red and $\frac{1}{5}$ of her beads are green. What fraction of her beads are NOT red? What fraction of her beads are NOT green?

4. Explain how you know $\frac{1}{5}$ represents a unit fraction.

5. Marina folded a piece of paper that is 10 inches by 8 inches into sections as shown below. What fraction of the total area is each section? Explain.



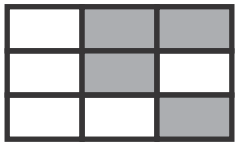
6. Divide the rectangle into 12 equal parts. What fraction does each part represent?

7. Li says that $\frac{4}{5}$ of the figure is gray. Is he correct? Explain?

8. The figure shows $\frac{2}{5}$. Draw the parts needed to complete the whole figure.

$\frac{2}{5}$

9. Select all the fractions that could describe this graphic.



- ☐ $\frac{4}{9}$
- ☐ $\frac{1}{3}$
- ☐ $\frac{2}{3}$
- ☐ $\frac{5}{9}$
- ☐ $\frac{7}{9}$

10. This picture represents $\frac{1}{3}$ of the length of Jo's desk.

Which option represents the whole length?

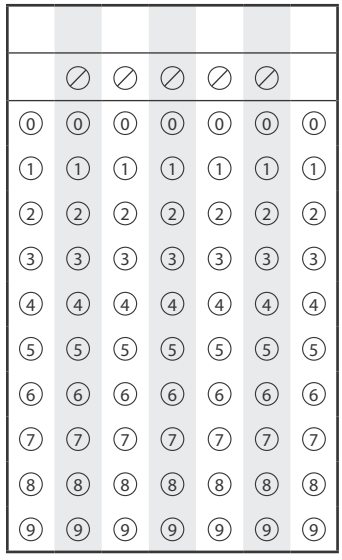
Ⓐ
The whole distance is 3 times as long.

Ⓑ
The whole distance is 2 times as long.

Ⓒ
The whole distance is 4 times as long.

Ⓓ
The whole distance is the same as the picture.

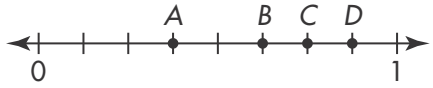
11. Peter divides an apple into 8 equal slices, to share with his friends. If they ate 5 slices of the apple altogether, what fraction of the apple did they eat?



Name _____

Alabama Course of Study for Mathematics Standards Practice
3.14a, 3.14b

1. Which point is $\frac{3}{8}$ on the number line?



Ⓐ Point A

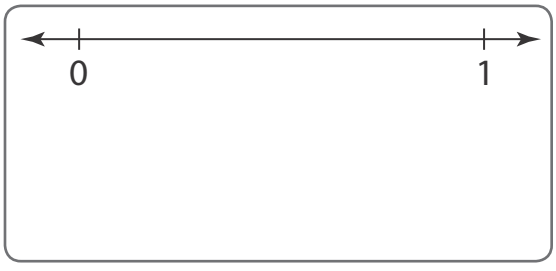
Ⓑ Point B

Ⓒ Point C

Ⓓ Point D

2. Part A

Divide the number line into 4 equal parts. Then write the fractions

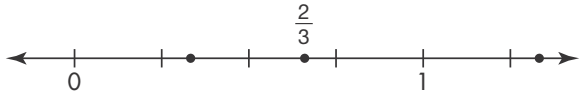


Part B

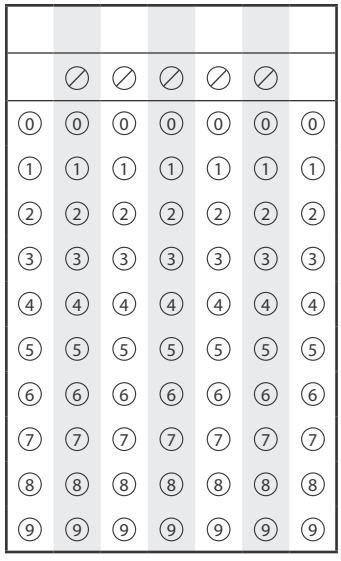
Draw a point at the end of the third fourth on the number line. Then complete the sentence.

$\frac{3}{4}$ is the same as ____ lengths of ____.

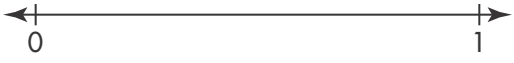
3. One point on the number line has been marked with the fraction $\frac{2}{3}$. Write a fraction for each of the other two points shown.



4. How many $\frac{1}{6}$s do you need to get $\frac{3}{6}$? Use the number line to help.

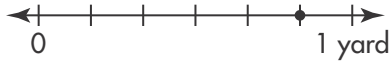


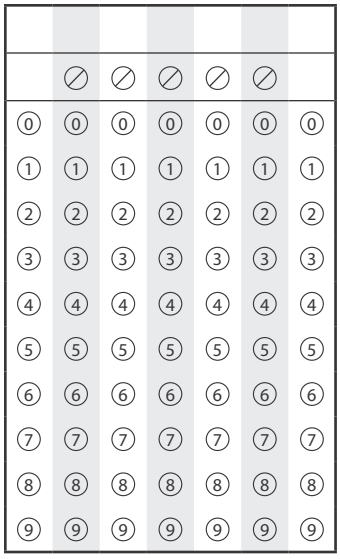
5. Divide the number line into 8 equal lengths. Then mark and label the fraction $\frac{5}{8}$.



6. Divide the number line into 3 equal lengths and label the point $\frac{1}{3}$.

7. How many $\frac{1}{6}$s do you need to get $\frac{5}{6}$? Use the number line to help.

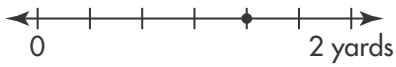


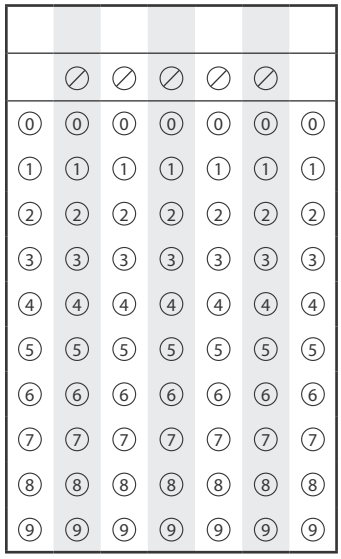


8. Divide the number line into equal lengths. Then mark and label the fraction $\frac{7}{8}$.

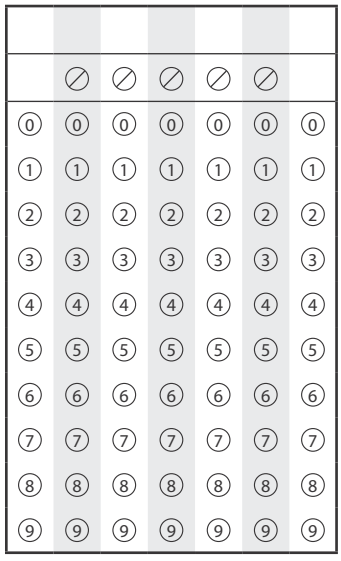
9. Divide the number line into equal lengths and label the point $\frac{5}{6}$.

10. How many $\frac{1}{3}$s do you need to get $\frac{4}{3}$? Use the number line below to help.

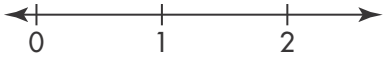




11. What fraction is represented by the length marked on the number line shown?



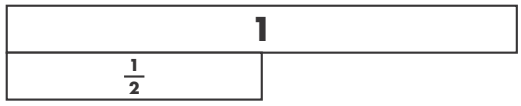
12. Divide the number line into equal lengths and label the point $\frac{5}{2}$.



Name _____

Alabama Course of Study for Mathematics Standards Practice
3.15a, 3.15b, 3.15c

1. Select all the fractions that are equivalent to $\frac{1}{2}$. Use the fractions strips to help you.



- ☐ $\frac{4}{8}$
- ☐ $\frac{3}{6}$
- ☐ $\frac{3}{9}$
- ☐ $\frac{4}{3}$
- ☐ $\frac{2}{4}$

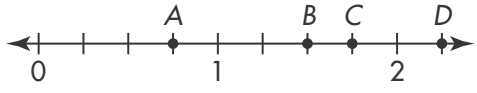
2. How many $\frac{1}{3}$s are in $\frac{7}{3}$?

	∅	∅	∅	∅	∅	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

3. Mr. Roberts is building a fence. He spends 90 minutes working on each of the 2 days. On the first day, he built $\frac{2}{5}$ of the fence. The second day, he built another $\frac{2}{5}$ of the fence. How many $\frac{1}{5}$s of the fence still need to be built?

	∅	∅	∅	∅	∅	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

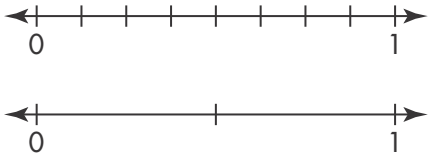
4. Which point represents 7 lengths of $\frac{1}{4}$ on the number line? Explain.



5. Roger has sunflower seeds in $\frac{4}{8}$ of his bird feeders and nuts in $\frac{1}{2}$ of his bird feeders. All of his bird feeders are the same type.

Part A

Roger says that $\frac{4}{8}$ and $\frac{1}{2}$ are equivalent fractions. Is he correct? Use the number lines to help.



Ⓐ Yes, Roger has 8 bird feeders.

Ⓑ Yes, $\frac{4}{8}$ and $\frac{1}{2}$ are the same distance from 0 when the wholes are equal.

Ⓒ No, the wholes might be different.

Ⓓ No, $\frac{4}{8}$ and $\frac{1}{2}$ do not line up on the number lines.

Part B

Roger wants to put dried fruit in the rest of his birdfeeders. What fraction of his bird feeders will he put dried fruit in?

Ⓐ $\frac{0}{8}$ Ⓒ $\frac{1}{2}$

Ⓑ $\frac{2}{8}$ Ⓓ $\frac{2}{2}$

---

6. Write two fractions with a denominator than 8 that are equivalent to $\frac{4}{8}$.

7. Part A

For each pair of fractions, write the equivalent whole number in the box.

$\frac{12}{6} = \frac{4}{2} =$ _____

$\frac{24}{8} = \frac{9}{3} =$ _____

$\frac{20}{4} = \frac{10}{2} =$ _____

Part B

Use your answers from Part A to write how you know a fraction is equivalent to a whole number.

8. Part A

Select all the fractions that are NOT equivalent to 1.

☐ $\frac{4}{4}$ ☐ $\frac{16}{8}$ ☐ $\frac{4}{6}$

☐ $\frac{3}{3}$ ☐ $\frac{0}{8}$

Part B

Explain your reasoning in Part A.

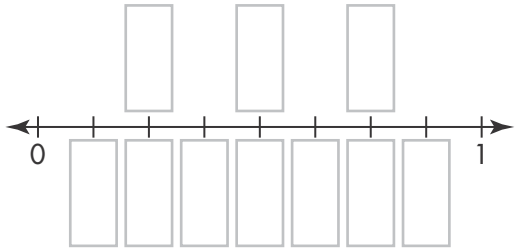
Name _____

Alabama Course of Study for Mathematics Standards Practice
3.15d

1. Janice and two of her friends are sharing an orange. Janice eats 2 of the 6 slices, and her two friends each eat $\frac{1}{3}$ of the orange. Who ate more of the orange, Janice or her two friends? Explain.

2. Write a comparison of $\frac{2}{8}$ and $\frac{2}{6}$ using symbols. Use a fraction strip model to explain your answer.

3. Verne is comparing two pieces of fabric to see if they are the same length. One piece is $\frac{3}{4}$ meter long. The other is $\frac{5}{8}$ meter long. Fill in the fractions on the number line to compare the lengths of the pieces of fabric. Explain whether they are the same length.



4. Write two fractions with a denominator of 8 that are closer to 0 than to 1. Explain your reasoning.

5. Which comparison does the fraction strips show?

Ⓐ $\frac{4}{6} = \frac{2}{3}$

Ⓑ $\frac{4}{6} < \frac{5}{6}$

Ⓒ $\frac{4}{8} > \frac{1}{8}$

Ⓓ $\frac{4}{8} < \frac{4}{6}$

---

6. Compare $\frac{3}{4}$ and $\frac{3}{6}$ without using fraction strips. Write the correct comparison using symbols, and explain your answer.

7. Sue ran $\frac{5}{6}$ mile on Monday and $\frac{4}{6}$ mile on Tuesday.

Part A

Which day did she run farther? Explain.

Part B

On Wednesday, Sue ran $\frac{4}{8}$ mile. She says that the distance she ran on Wednesday is the same as the distance that she ran on Tuesday. Is she correct? Explain.

Part C

On Thursday, Sue ran $\frac{5}{6}$ mile. Did Sue run farther on Thursday or on Monday? Explain.

Name _____

1. Mark looked at a clock when he left home for his basketball game. He looked at the clock again when he got back home after the game. How long was Mark away from home?

Left home

Returned home

2. Darla needs to be at her babysitting job by 7:00 P.M. It takes her 15 minutes to ride her bike to the job, 20 minutes to eat dinner, and 50 minutes to do her homework. Darla wants to do her homework and eat dinner before she rides to her babysitting job. What time does Darla need to start her homework?

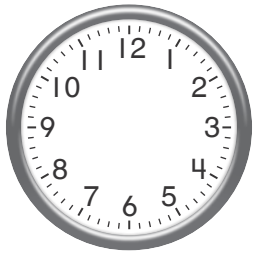
Ⓐ 6:35 P.M.

Ⓑ 5:15 P.M.

Ⓒ 5:35 P.M.

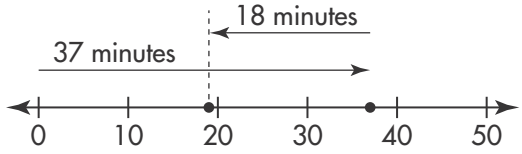
Ⓓ 6:10 P.M.

3. Draw hands on the clock to show 5:56.



4. Gareth plans to start the party at 7 P.M. It takes Gareth 15 minutes to make the punch, 25 minutes to prepare the snacks, and 45 minutes to clean the house. If Gareth wants to start by cleaning the house, what time should he start cleaning? Use a number line to show your reasoning.

5. Marcus rode his bike for 37 minutes on Saturday and 18 minutes on Sunday. Write and solve an equation to find how many more minutes Marcus rode his bike on Saturday.



6. Tara and Mahri walked the same distance to dance practice. Their start and end times were different. Who walked faster and by how many minutes?

Tara

Start End

Mahri

Start End

Ⓐ Tara was 5 minutes faster.

Ⓑ Mahri was 5 minutes faster.

Ⓒ Mahri was 15 minute faster.

Ⓓ They finished in the same amount of time.

7. Cari and Nick went shopping for their birthdays. They spent 37 minutes in the toy store and 52 minutes in the clothing store. How long did Cari and Nick spend shopping?

8. Part A

An all-city swim meet started at 9:30 A.M. It ended at 3:45 P.M. How long did the swim meet last?

Ⓐ 6 hours

Ⓑ 6 hours, 15 minutes

Ⓒ 5 hours, 15 minutes

Ⓓ 5 hours, 45 minutes

Part B

There is a 30-minute lunch break during the swim meet. How long does the meet last without the lunch break?

9. Jared spent 35 minutes practicing piano on Tuesday, 25 minutes practicing on Wednesday, and 22 minutes practicing on Thursday. How long did Jared spend practicing in all?

Name _____

1. A pet store sells bags of dog food. Each bag weighs 7 kilograms. If you buy 3 bags, how many kilograms of dog food will you buy?

2. Danny said the capacity of a bath tub is about 132 liters. Anna said it is 132 kilograms. Who is correct? Select the best answer.

Ⓐ Danny is correct because liters are units of capacity and kilograms are units of mass.

Ⓑ Anna is correct because kilograms are units of capacity.

Ⓒ They are both correct because liters and kilograms are units of capacity.

Ⓓ Neither is correct because their estimates are not reasonable.

3. Name a metric unit that would be best to measure the mass of a sugar cube. Then, using that unit, give a reasonable estimate for the mass of a sugar cube.

4. Jason has 3 bottles of juice. Each bottle holds 3 liters. His friend Natalie has 6 bottles of juice, each of which holds 1 liter. How much more juice does Jason have than Natalie?

5. Part A

Sergio is looking for a tool to measure the capacity of a water bottle. Which tool should he use?

Ⓐ Yardstick

Ⓑ 1-liter container

Ⓒ Pan balance

Ⓓ Clock

Part B

Using the tool identified in Part A, what unit will Sergio use to measure the capacity of the water bottle?

Ⓐ Hours

Ⓑ Grams

Ⓒ Yards

Ⓓ Liters

6. Mrs. Abita writes a recipe saying that it requires 1 g of flour. Is this reasonable? Explain.

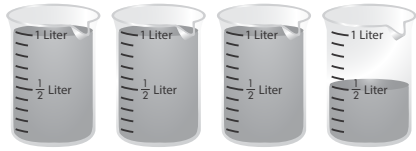
7. Explain why it would be better to use liters rather than milliliters to measure the capacity of a pool.

8. Tyler used 18 kilograms of potting soil to fill flower boxes. He had already used 23 kilograms of potting soil to fill the flower pots. Write and solve an equation to find how many kilograms of potting soil Tyler used in all.

9. Terri measured the weight of a cat using kilograms. Ashley measured the same cat using grams. How did the measurements compare? Select all the sentences that are true.

- ☐ There were an equal number of grams and kilograms.
- ☐ There were fewer grams than kilograms.
- ☐ There were more grams than kilograms.
- ☐ There were fewer kilograms than grams.
- ☐ There were more kilograms than grams.

10. Taylor has a fish tank and needs to clean it. Her fish need to stay in water while she cleans. She measures the amount of water the fish need. Look at the total capacity represented in the picture. How much water do her fish need?



Name _____

1. Use the data from the frequency table to make a picture graph.

Data	Favorite Season		
	Season	**Tally**	**Frequency**
	Spring	///	3
	Summer	𝍸 𝍸 //	12
	Autumn	𝍸 /	6
	Winter	𝍸 ////	9

Part A

Which key you will use?

Ⓐ ✹ = 1 student

Ⓑ ✹ = 3 students

Ⓒ ✹ = 2 students

Ⓓ ✹ = 4 students

Part B

Draw a picture graph using that key.

2. Use the data from the picture graph you made in Question 1. How many students took the survey in all?

3. Use the data from the picture graph you made in Question 1. How many more students chose winter than autumn?

4. Matias made a picture graph to show how many birds he saw bird-watching each week. In which week or weeks did he see 5 birds?

Birds Seen in July	
Week 1	
Week 2	
Week 3	
Each  = 2 birds. Each  = **1 bird**	

Ⓐ Week 1

Ⓑ Week 3

Ⓒ Week 2

Ⓓ Weeks 1 and 3

5. Look at the picture graph above. How many more birds did Matias see in Week 3 than in Week 2?

6. Sasha is making a bar graph to compare how many books she has of each type. She has 15 music books, 10 nature books, 20 storybooks, and 5 pop-up books. Which scale makes the most sense for Sash to use with her graph?

Ⓐ Each grid line marks 1 more book.

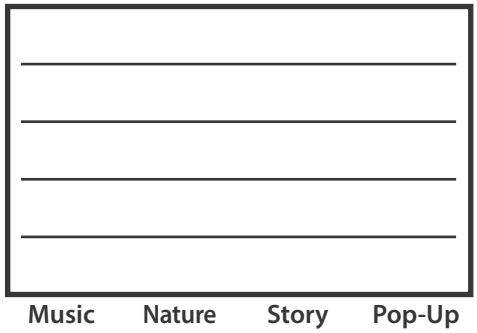
Ⓑ Each grid line marks 2 more books.

Ⓒ Each grid line marks 5 more books.

Ⓓ Each grid line marks 10 more books.

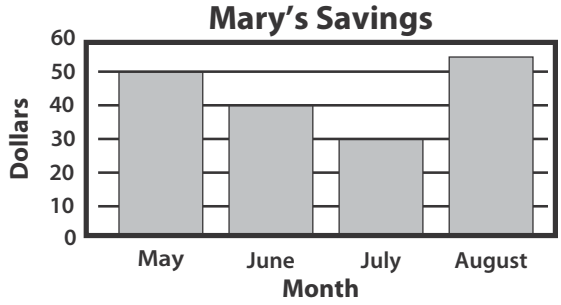
7. Use the information in Question 6 to make a bar graph of Sasha's books.

Sasha's Books



8. Use the graph in Question 7. How many fewer pop-up books does Sasha have than music books?

9. The graph shows the amount of money Mary saves in each of 4 months. In which month did she save the least money?



Ⓐ May

Ⓑ June

Ⓒ July

Ⓓ August

10. Suppose that Mary saved $15 in April. Where would the bar end?

11. Mary needed to save $150 by the end of August for a new bike. Did she save enough? Explain.

Name _____

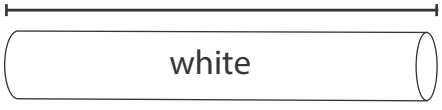
1. Moussa has a box of colored chalk. The table shows the lengths of some of the pieces of chalk.

Lengths of Pieces of Chalk

Chalk Color	Length (nearest quarter inch)
Yellow Chalk	2 in.
Blue Chalk	$2\frac{1}{2}$ in.
Red Chalk	$2\frac{1}{4}$ in.
Orange Chalk	3 in.
Green Chalk	$3\frac{1}{2}$ in.
Purple Chalk	$2\frac{3}{4}$ in.

Part A

Measure the lengths of the gray and white pieces of chalk to the nearest quarter inch.



Part B

Draw a line plot to show the lengths of all of the pieces of chalk to the nearest quarter inch.

2. Andrea is making a line plot to show the data in the table.

Part A

Which numbers will get 1 dot above them?

3rd Grader Heights (in inches)				
47	50	49	53	47
48	44	48	50	52
51	49	52	47	48
48	53	52	50	46

Ⓐ 44, 51, 55

Ⓑ 44, 46, 51

Ⓒ 46, 49, 51

Ⓓ 49, 53

Part B

How many more dots will 48 inches have than 47 inches?

Ⓐ 1

Ⓑ 2

Ⓒ 3

Ⓓ 4

Part C

How many dots will there be in all for heights 50 inches and above?

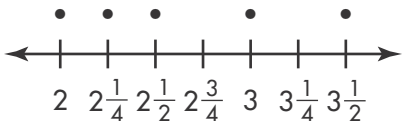
3. Lisa measured the lengths of her pencils to the nearest fourth inch. Make a line plot that shows the lengths of Lisa's pencils.

$4\frac{1}{2}$, $3\frac{1}{2}$, 3, 3, 4, $4\frac{1}{2}$, 3, 5, $4\frac{1}{2}$, 4

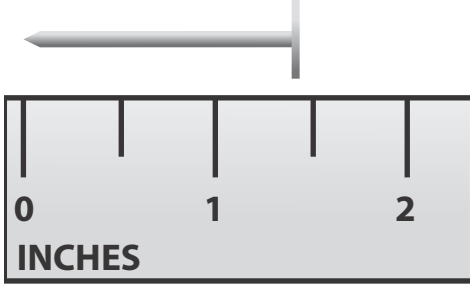
4. Ty made a line plot to show this data.

2, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, $3\frac{1}{2}$

What was Ty's mistake? Explain.



5. What is the length of the nail to the nearest half inch?



6. Halle has an art kit with different types of crayons. The lengths of each type is shown below.

A
B
C
D

Part A

Measure and record the lengths of each of these crayons to the nearest fourth inch.

Part B

The Number of Crayons table shows how many of each crayon type Halle has. Draw a line plot to show the lengths of the crayons.

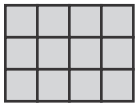
Number of Crayons

Crayon	Number
A	3
B	4
C	4
D	1

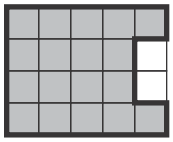
Name _____

Alabama Course of Study for Mathematics Standards Practice
3.20a, 3.20b, 3.21

1. Count to find the area of the shape. Tell if the area is exact or an estimate.



2. Choose the area of the gray shape.



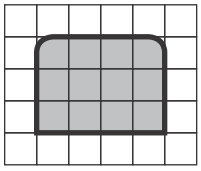
Ⓐ 14 square units

Ⓑ 16 square units

Ⓒ 18 square units

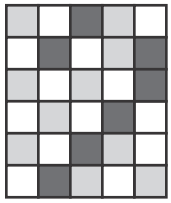
Ⓓ 20 square units

3. Katherine says that the gray figure below has an area of 10 square units. Is she correct? Explain.



☐ = 1 square inch

4. Tyler makes a wall mosaic with 1 foot tiles as shown below. Which tiles cover the least area in Tyler's mosaic: the white tiles, the light gray tiles or the dark gray tiles?

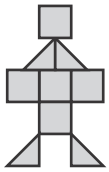


5. Show 2 different unit squares that you can use to measure the areas of these rectangles. Find the areas with your unit squares. Write the two areas.

6. Which rectangle has a larger area? Explain how you know.

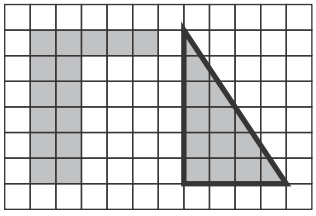
☐ = 1 square unit

7. Malik made this shape from tiles. What is the area of the shape? Explain.



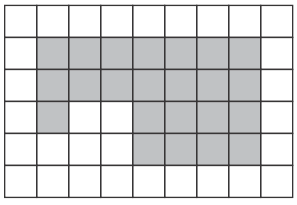
☐ = 1 square unit

8. Sasha says these shapes have the same area. Yuri says the triangle has a smaller area than the irregular shape. Who is correct? Explain.

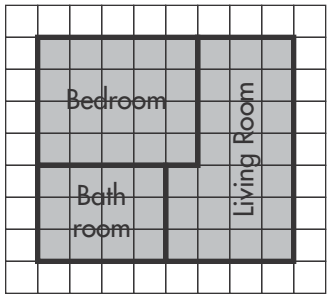


☐ = 1 square foot

9. Count to find the area of the shape. Tell if the area is exact or an estimate.



10. Garett is building the house shown on the grid.



☐ = 1 square meter

Part A

What is the area of the entire house?

Ⓐ 36 square meters

Ⓑ 40 square meters

Ⓒ 49 square meters

Ⓓ 56 square meters

Part B

What is the area of the bathroom? What is the area of the bedroom?

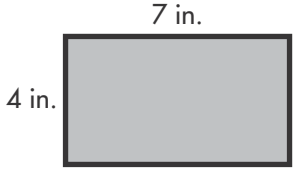
Part C

How can you use the information from Part A and Part B to find the area of the living room?

Name _____

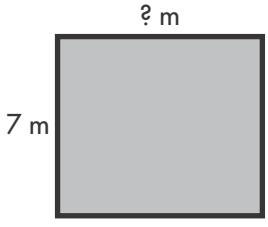
Alabama Course of Study for Mathematics Standards Practice
3.22a, 3.22b

1. Find the area of the rectangle.



2. One side of a square garden is 7 yards long. Explain how you can find the area of the garden. What is the area?

3. This rectangle has an area of 56 square meters. What is the missing length? Use an equation to explain.



4. Cari knows that the area of a rectangle is 72 square units. The sides measure 8 units and 9 units. What product can she find using these facts? Explain.

5. The length of a rectangle is 4 cm. Match each possible width of a rectangle to the related area.

	20 cm^2	24 cm^2	16 cm^2	32 cm^2
4 cm	❒	❒	❒	❒
5 cm	❒	❒	❒	❒
6 cm	❒	❒	❒	❒
8 cm	❒	❒	❒	❒

6. Select all the ways to find the area of a rectangle with side lengths 8 ft and 3 ft.

- ☐ $8 \text{ ft} + 3 \text{ ft} = 11 \text{ ft}^2$
- ☐ $2(8 \text{ ft} \times 3 \text{ ft}) = 48 \text{ ft}^2$
- ☐ $8 \text{ ft} \times 3 \text{ ft} = 24 \text{ ft}^2$
- ☐ $2(8 \text{ ft} + 3 \text{ ft}) = 22 \text{ ft}^2$
- ☐ $3 \text{ ft} \times 8 \text{ ft} = 24 \text{ ft}^2$

7. Marty covers his desk with squares of paper that are each 1 square foot.

Part A

Marty uses 6 squares of paper. Draw a model to represent this situation.

Part B

What is the area of his desk?

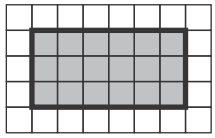
Part C

Suppose Marty measured the side lengths of his desk, and they are 2 ft and 3 ft. What is the area of his desk? Is the area the same as the area found using squares of paper?

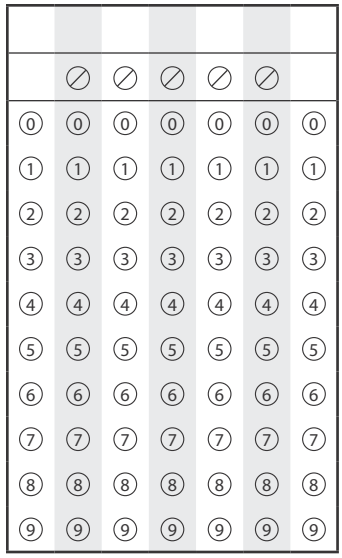
8. Bo's backyard is a rectangle with an area of 45 yd^2. Select all the dimensions that his backyard could measure.

- ☐ 9 yd × 5 yd
- ☐ 5 yd × 9 yd
- ☐ 6 yd × 8 yd
- ☐ 8 yd × 6 yd
- ☐ 9 yd × 6 yd

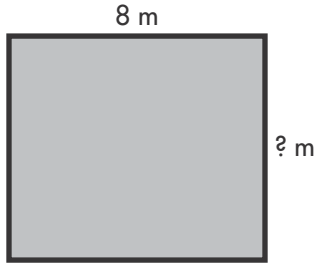
9. Find the area of the gray rectangle shown on the grid, in square units.



☐ = 1 square unit



10. What is the missing side length of the rectangle shown, if it has an area of 56 square meters?



Ⓐ 4 meters

Ⓑ 12 meters

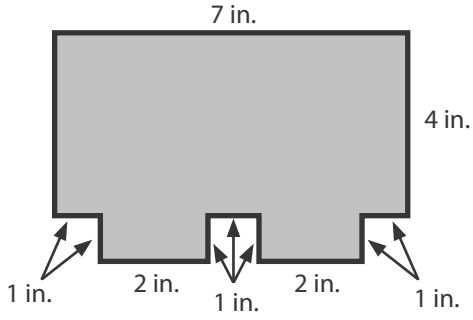
Ⓒ 8 meters

Ⓓ 7 meters

Name _____

Alabama Course of Study for Mathematics Standards Practice
3.22c, 3.22d

1. What is the area of Mark's figure?



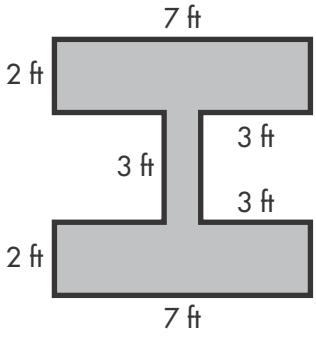
Ⓐ 22 square inches

Ⓑ 28 square inches

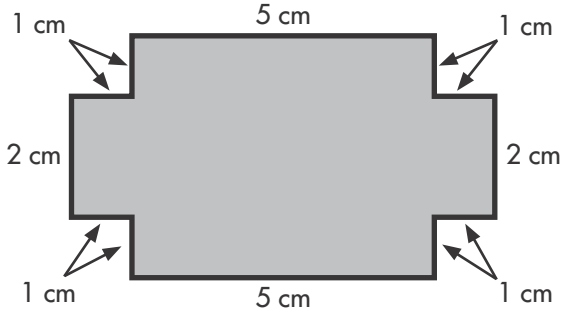
Ⓒ 32 square inches

Ⓓ 35 square inches

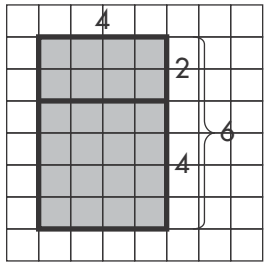
2. A sign has the letter I on it, as shown. Draw lines to divide the shape into rectangles. Then find its area.



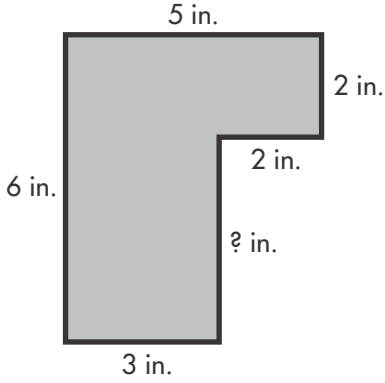
3. What is the total area of the figure?



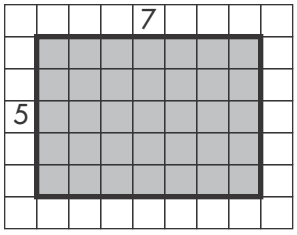
4. Use the Distributive Property to write the equation that represents the picture. Then give the area of each smaller rectangle and the larger rectangle.



5. Find the missing side length. Then find the area. Explain how you found the area.



6. Select all the ways to break apart the gray rectangle into two smaller rectangles. Then find the area of the gray rectangle.



☐ $5 \times 7 = 5 \times (5 + 2)$
$= (5 \times 5) + (5 \times 2)$

☐ $7 \times 5 = 7 \times (2 + 3)$
$= (7 \times 2) + (7 \times 3)$

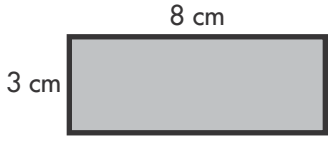
☐ $5 \times 7 = 5 \times (7 + 7)$
$= (5 \times 7) + (5 \times 7)$

☐ $5 \times 7 = 5 \times (6 + 1)$
$= (5 \times 6) + (5 \times 1)$

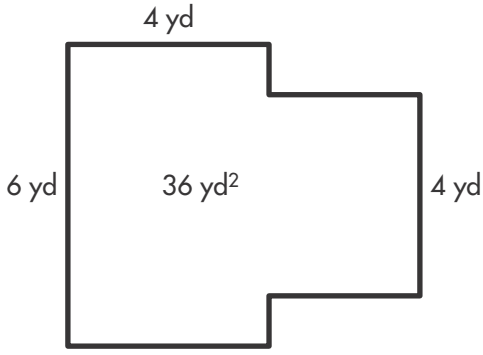
☐ $7 \times 5 = 7 \times (5 + 2)$
$= (7 \times 5) + (7 \times 2)$

Area = _____ square units

7. Ahmed draws a rectangle. Explain how to find the area using the Distributive Property.



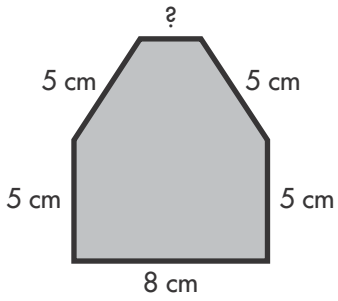
8. Inez knows that the area of her backyard is 36 square yards, but she doesn't know all of its measurements. The figure shows the outline of her backyard. Fill in the missing side lengths.



9. Taryn knows the multiplication facts $8 \times 4 = 32$ and $8 \times 7 = 56$. Explain how she can use these facts to find the area of a rectangle with side lengths 8 ft and 11 ft. Draw a diagram to show your answer.

Name _____

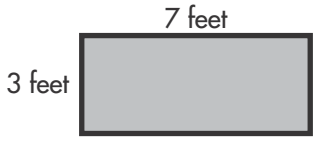
1. The perimeter of a game piece is 31 centimeters. What is the missing side length?



Ⓐ 2 centimeters Ⓒ 4 centimeters

Ⓑ 3 centimeters Ⓓ 5 centimeters

2. Gary's bedroom rug is shown below.



Part A

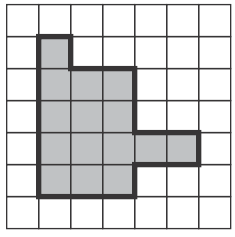
Find the perimeter and area of the rug.

Part B

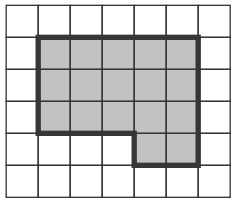
Could a square with whole-number side lengths have the same perimeter as the rug? The same area? Explain?

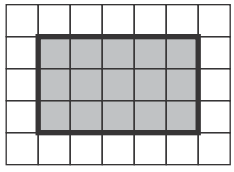
3. Terri is making a square pattern. Each side is 4 inches. Is the perimeter of the pattern the same as the area of the pattern? What is the perimeter? What is the area?

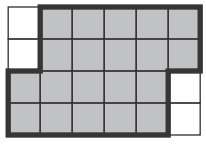
4. Hari's garden design is below.

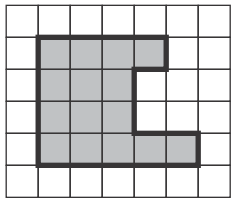


Which of the following shapes has a different area but the same perimeter as Hari's design?

Ⓐ 

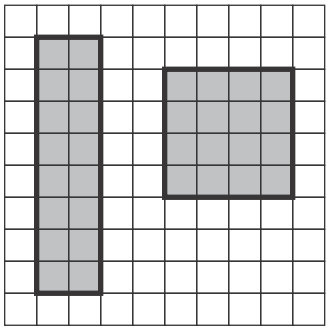
Ⓑ 

Ⓒ 

Ⓓ 

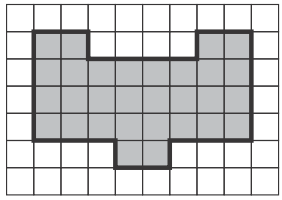
5. Jericho is making a rectangular garden 8 feet long and 16 feet wide. He plans to put a fence around the garden, with fence posts that are 4 feet apart. Each corner has a fence post. How many fence posts will Jericho need? What is the perimeter of the garden? Draw a picture to help solve the problem.

6. Tanya drew two figures. Select all of the statements that are true about the figures.

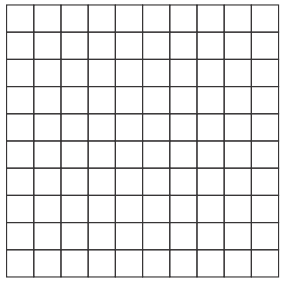


- ☐ The shapes have different perimeters.
- ☐ The shapes have different areas.
- ☐ The shapes have the same perimeter.
- ☐ The shapes have the same area.
- ☐ The square has a greater area than the rectangle.

7. Perry's tile design is shown below.



Draw another tile design that has the same area but a different perimeter than Perry's design.



8. Mrs. Abidi has 24 carpet squares. How should she arrange them so that she has the smallest perimeter?

Ⓐ 2 by 12 rectangle

Ⓑ 3 by 8 rectangle

Ⓒ 4 by 6 rectangle

Ⓓ The perimeter will always be the same.

9. Find the possible side lengths of rectangles that have an area of 16 square feet. Do they have the same perimeter? What generalization can you make from your answer?

Name _____

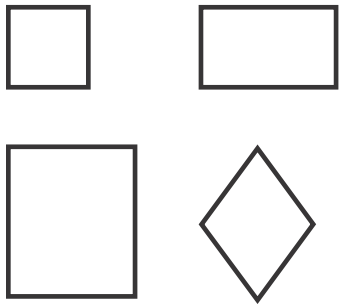
1. Draw a quadrilateral that is NOT a rhombus, rectangle, or square. Explain your answer.

2. This figure is a quadrilateral, but it is NOT a rectangle. Why?

3. Select all of the shapes that have only four sides.

- ☐ Pentagon
- ☐ Square
- ☐ Rhombus
- ☐ Octagon
- ☐ Quadrilateral

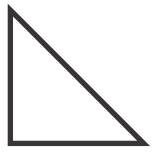
4. Select all attributes the following shapes share.



- ☐ Two-dimensional
- ☐ Four right angles
- ☐ Quadrilateral
- ☐ Four equal-length sides
- ☐ Polygonal

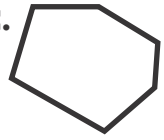
5. Identify each of the following shapes by name and whether or not they are a quadrilateral or polygon.

a.

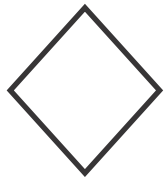


b.

c.



d.



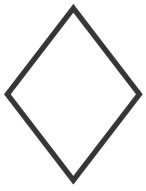
	Name	Quadrilateral	Polygon
a			
b			
c			
d			

6. Describe the difference between a square and a rhombus using attributes of quadrilaterals.

7. Select all the polygons that have more sides than a square.

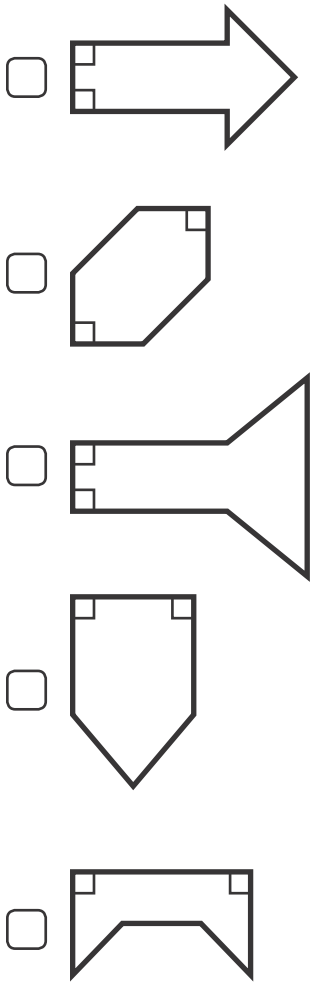
- ☐ Rhombus
- ☐ Rectangle
- ☐ Triangle
- ☐ Heptagon
- ☐ Octagon

8. Select all the terms that can describe this figure.



- ☐ Rectangle
- ☐ Polygon
- ☐ Square
- ☐ Quadrilateral
- ☐ Rhombus

9. Select all the shapes that have six sides and two right angles.



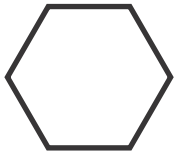
10. Select all the attributes of a quadrilateral.

- ☐ Four sides
- ☐ Five sides
- ☐ Polygonal
- ☐ Four right angles
- ☐ Equal sides

Name _____

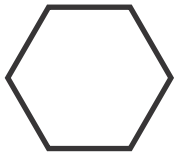
1. This figure shows $\frac{3}{9}$. Draw the parts needed to complete the whole figure and write a fraction to represent the whole.

2. Divide this figure for each part below.



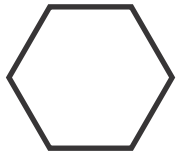
Part A

Divide it into 6 equal parts. What fraction does each part represent?

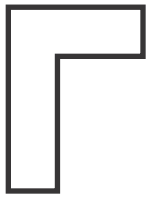


Part B

Divide it into 3 equal parts. Which quadrilateral is represented by each part?

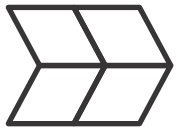


3. Is it possible to divide the figure shown into 2 equal parts? Explain your answer.



4. Draw and shade a rectangle to show $\frac{7}{7}$.

5. A chevron can be divided into 4 equal rhombuses as seen below. If each rhombus is then divided into 2 equal triangles, what fraction would represent the whole?



Ⓐ $\frac{4}{4}$ Ⓒ $\frac{2}{2}$

Ⓑ $\frac{8}{8}$ Ⓓ $\frac{6}{6}$

6. Terry has a sandwich in the shape of a trapezoid as seen below.

Part A

If he wants to share the sandwich equally between himself and two friends, how many pieces will he need to cut?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

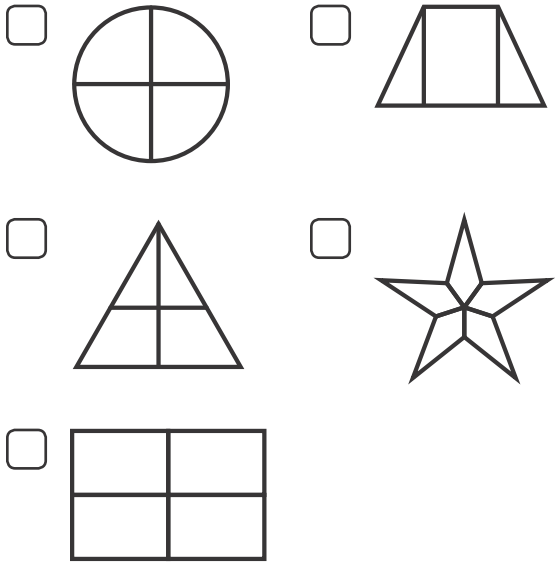
Part B

What fraction would represent each piece of the whole after the sandwich is divided?

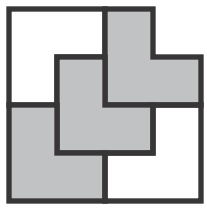
	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

7. Monique has a rectangular garden bed. She has eight types of flowers she would like to plant in equal plots. Draw a picture to represent the divided garden bed.

8. Select all the figures that are divided into equal parts.



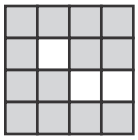
9. What fraction represents the gray portion of this figure? Explain.

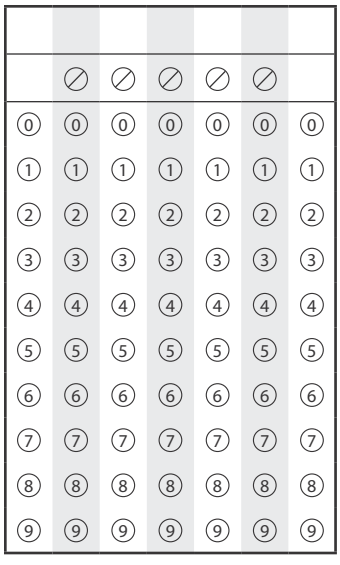


Name _____

Practice Test
Form A

1. How many square units is the total area of the gray shape, if each square represents one square unit?





2. In which equation is the missing number 7?

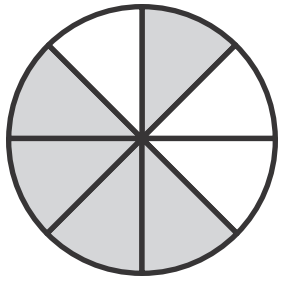
Ⓐ $6 \times ? = 42$

Ⓑ $? \div 5 = 4$

Ⓒ $36 \div ? = 6$

Ⓓ $? \times 6 = 30$

3. What fraction of the whole is gray? What fraction of the whole is white?



4. Daisha needs to be at her scout meeting by 6:30 P.M. It takes her 20 minutes to ride her bike to the meeting, 15 minutes to eat dinner, and 35 minutes to do her homework. She will do her homework before she eats dinner. What time does Daisha need to start her homework?

Ⓐ 4:20 P.M.

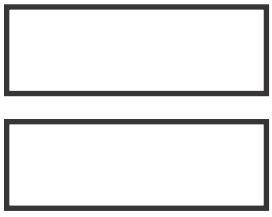
Ⓑ 4:35 P.M.

Ⓒ 5:20 P.M.

Ⓓ 5:55 P.M.

5. Draw and shade a rectangle to show $\frac{3}{4}$. Explain how you know you have colored the correct parts of the picture.

6. Show two different unit squares that you can use to measure the areas of these rectangles. Find the areas with your unit squares. Write the two areas.



7. Explain why this figure is a quadrilateral, but NOT a rectangle.

8. Steve is building a fence. On the first day, he built $\frac{2}{6}$ of the fence. The second day, he built $\frac{3}{6}$ of the fence. How many $\frac{1}{6}$s of the fence still need to be built?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

9. Draw a shape that contains a right angle have fewer sides than a quadrilateral. Name the shape that you drew.

10. Ronald is bringing a sports drink for his basketball team. Select the best estimate for how much sports drink he should bring.

Ⓐ $\frac{1}{4}$ L

Ⓑ 400 L

Ⓒ 14 L

Ⓓ $\frac{4}{4}$ L

11. Select all the numbers that are equal to 700 when rounded to the nearest hundred.

- ☐ 777
- ☐ 618
- ☐ 683
- ☐ 750
- ☐ 742

12. Emmanuelle is making a line plot to show the data in the table.

3rd Grade Height (in inches)				
47	50	49	53	47
47	43	47	51	52
49	48	46	50	43
51	50	46	46	44

Part A

What is the most common height? How can you tell?

Part B

How many dots will there be in a line plot of heights 50 inches and above?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

13. What is the sum of 477 + 398?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

14. Julian plays piano 4 times a week and plays violin 3 times a week. How many times did Julian play an instrument in the last 8 weeks?

Part A

Write an equation to solve this problem. Let *x* be the number of times he plays an instrument.

Part B

Solve the equation for *x*.

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

15. A number was rounded to the nearest 100 and the result was 800. What is the smallest value the number could be?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

16. Jon says that $\frac{3}{7}$ of the figure is gray. Is he correct? Explain.

17. Select the expression that can help you solve 6×8.

Ⓐ $(2 + 2) \times (3 + 4)$

Ⓑ $(6 + 2) \times (6 + 4)$

Ⓒ $(6 \times 5) + (6 \times 3)$

Ⓓ $(2 + 4) \times (3 + 4)$

18. A hotel has a saltwater pool that is 30 feet long and 10 feet wide.

Part A

In square feet, what is the area of the saltwater pool?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

Part B

The hotel also has a chlorine pool. It has the same area as the saltwater pool, but it has a different perimeter. Select all that could be the length and width of the chlorine pool.

- ☐ 15 ft long and 20 ft wide
- ☐ 20 ft long and 20 ft wide
- ☐ 20 ft long and 15 ft wide
- ☐ 15 ft long and 40 ft wide
- ☐ 60 ft long and 5 ft wide

19. A worker at a clothing store needs to set up 6 display tables with 8 sweaters on each table. How many sweaters are needed for this display?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

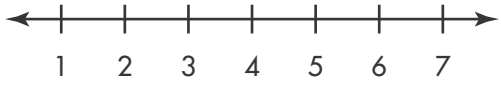
20. Lauretta says that when any number between 1 and 9 is multiplied by 5, the product is odd. Is this correct? Explain using an example.

21. Johann is making a rectangular pattern. The area is 16 square inches. Can you tell what the perimeter of the pattern is? Explain.

22. Sebastien has a box of colored pencils. The table shows the lengths of his pencils.

Lengths of Colored Pencils	
Color	**Length (inches)**
Yellow	3
Blue	5
Red	2
Orange	3
Green	6
Purple	4

Complete the line plot to show the lengths of Sebastien's colored pencils.



Lengths of Colored Pencils (inches)

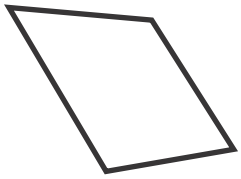
23. Select all the equations that demonstrate the Distributive Property.

- ☐ $2 \times (8 + 2) = (2 \times 8) + (2 \times 2)$
- ☐ $2 \times 10 = 20$
- ☐ $(6 \times 5) \times 3 = 6 \times (5 \times 3)$
- ☐ $(1 + 1) \times 10 = (1 \times 10) + (1 \times 10)$
- ☐ $2 \times 10 = 10 \times 2$

24. What number multiplied by 5 is 45?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

25. Select all the terms that can be used to describe this shape.



- ☐ Polygon
- ☐ Rectangle
- ☐ Square
- ☐ Quadrilateral
- ☐ Rhombus

26. What is the product of 6 and 8? Write a related division equation.

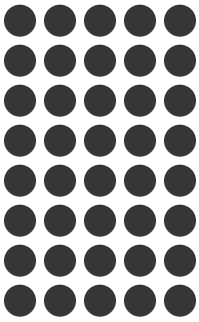
27. Which of these comparisons are correct? Select all that apply.

- ☐ $\frac{5}{6} > \frac{5}{8}$
- ☐ $\frac{2}{3} > \frac{2}{6}$
- ☐ $\frac{3}{4} < \frac{3}{6}$
- ☐ $\frac{4}{4} < \frac{4}{6}$
- ☐ $\frac{1}{5} = \frac{1}{5}$

28. Gerald was training to run a full marathon. He ran 20 days in a row for 10 miles each day. How many miles did Gerald run in all? Write an equation to solve this problem.

29. Rashad measures the area of his bed with squares of paper that are each 1 square foot. Rashad measures the length of his bed from the bottom to the pillow as 5 squares. From the pillow to the top is 1 square. The bed is 3 squares wide. How many total squares of paper will cover the bed?.

30. Write and solve a multiplication equation for the array.



31. A sample of students are asked their favorite color. The results are summarized in a frequency table.

Favorite Color	
Color	**Frequency**
Red	28
Yellow	7
Blue	21

If you want to make a picture graph of these data, which key makes the most sense?

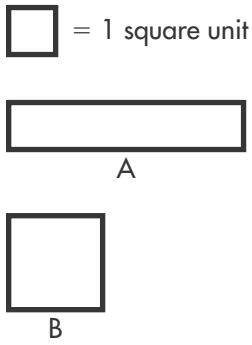
Ⓐ Each picture equals 2 students.

Ⓑ Each picture equals 3 students.

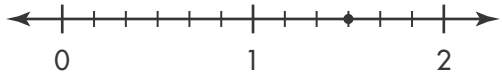
Ⓒ Each picture equals 5 students.

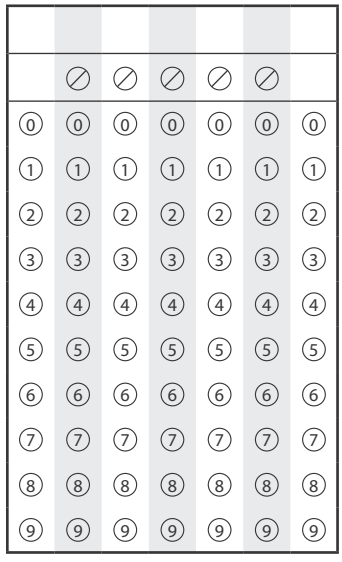
Ⓓ Each picture equals 7 students.

32. Which rectangle has a larger area? Explain how you know.



33. How many $\frac{1}{6}$s do you need to make $1\frac{1}{2}$? Use the number line below to help.





34. Sandy earned $30 raking leaves. He promised that he would divide any earnings equally between himself his four friends, who helped him rake leaves. How many dollars will each person receive?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

35. Sal made $30 per day selling shirts at a festival for the last 8 days. How many dollars did Sal make selling shirts in total?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

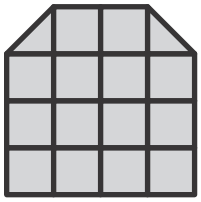
36. Divide the number line into 8 equal lengths. Then mark and label the fraction $\frac{2}{8}$.

37. Solve 498 − 209.

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

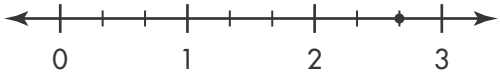
38. Draw a picture to show 24 divided by 8.

39. Roxanne claims that the area of the figure shown is 16 square inches. Is she correct? Explain.



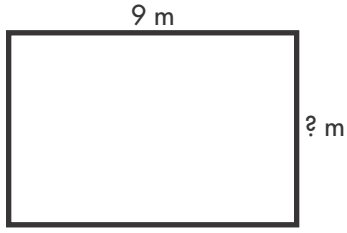
= 1 square inch

40. How many $\frac{1}{3}$s do you need to get $\frac{8}{3}$? Use the number line below to help.



41. Divide the rectangle into 9 equal parts. What fraction does each part represent?

42. How many meters long is the missing side of this rectangle, if its area is 54 square meters?



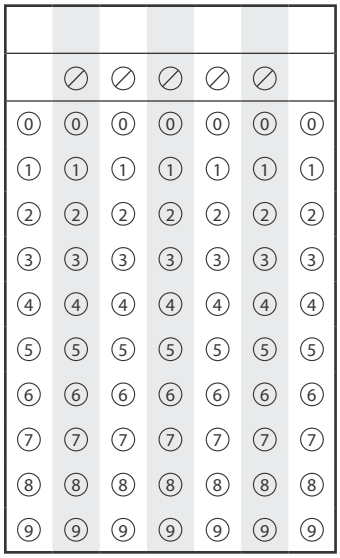
43. Write the correct symbol $<$, $=$, $>$ to compare each pair of fractions.

$\frac{3}{4}$ $\frac{3}{8}$

$\frac{3}{6}$ $\frac{4}{8}$

$\frac{1}{3}$ $\frac{2}{3}$

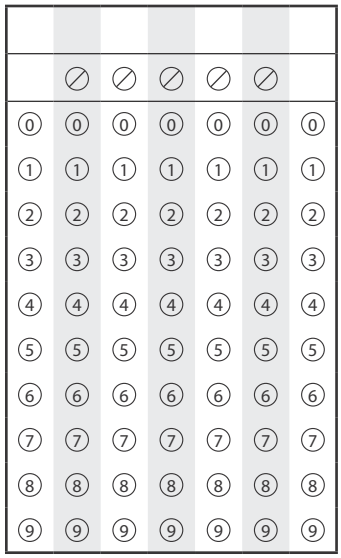
44. Veronica earns $2 for each hat she sells and $8 for each scarf she sells. How many hats must Veronica sell to earn the same amount that she earns selling 4 scarves?



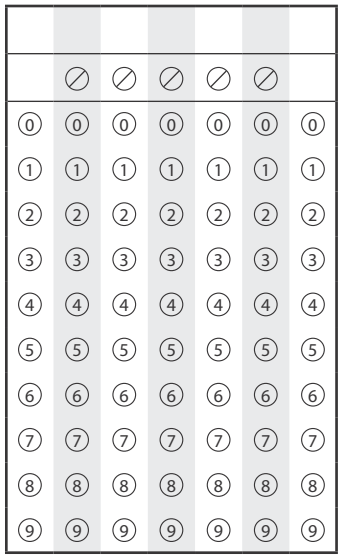
45. Draw an array showing the multiplication expression related to 18 divided by 3. Draw rectangles around the division groupings, and write the multiplication expression.

46. How do you know that a fraction is equivalent to 2? Give an example to prove your answer.

47. Two grocery stores in the same town sell bags of potatoes. At Store A, each bag weighs 6 kilograms. At Store B, each bag weighs 11 kilograms. If you buy 5 bags from each store, how many more kilograms of potatoes will you buy from Store B?



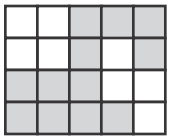
48. This week, Marie spent $5 on lunch each of the 5 school days and $12 on lunch on Saturday. How many dollars did Marie spend on lunch this week?



Name _____

Practice Test
Form B

1. How many square units is the total area of the gray shape, if each square represents one square unit?



	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

2. In which equation is the missing number 5?

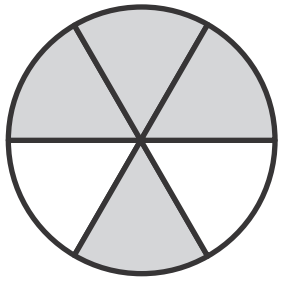
Ⓐ $5 \times ? = 35$

Ⓑ $15 \div ? = 3$

Ⓒ $42 \div ? = 6$

Ⓓ $? \times 8 = 45$

3. What fraction of the whole is gray? What fraction of the whole is white?



4. Holden needs to be at school by 8:45 A.M. It takes him 15 minutes to walk to school, 20 minutes to eat breakfast, and 10 minutes to get dressed. What time does Holden need to get up in the morning?

Ⓐ 8:20 A.M.

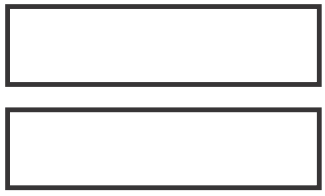
Ⓑ 8:05 A.M.

Ⓒ 7:50 A.M.

Ⓓ 8:00 A.M.

5. Draw and shade a rectangle to show $\frac{5}{8}$. Explain how you know you have shaded the correct parts of the picture.

6. Show two different unit squares that you can use to measure the areas of these rectangles. Find the areas with your unit squares. Write the two areas.



7. Explain why this figure is a quadrilateral, but NOT a rhombus.

8. Mrs. Lee is painting her house. On the first day, she painted $\frac{1}{8}$ of the house. The second day, she painted $\frac{3}{8}$ of the house. How many $\frac{1}{8}$s of the house still need to be painted?

	⊘	⊘	⊘	⊘	⊘	
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

9. Draw a shape that contains exactly one right angle and four sides that are all different lengths. Name the shape that you drew.

10. Janet wants to find the mass of her large dog, Titan. He won't fit on a pan balance so she decides to estimate the mass of Titan. Select the best estimate for the mass of a large dog.

Ⓐ 45 kg

Ⓑ 4 kg

Ⓒ 400 g

Ⓓ $\frac{1}{4}$ kg

11. Select all the numbers that are equal to 450 when rounded to the nearest ten.

☐ 474

☐ 454

☐ 448

☐ 439

☐ 451

12. Uri collected rainfall data for all the days when it rained at his house. He is making a line plot to show the data.

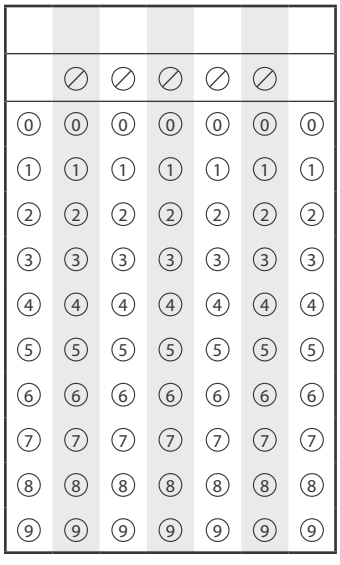
Rainfall (in millimeters)				
1	5	8	3	8
4	3	8	12	6
7	2	1	1	6
8	4	3	8	11

Part A

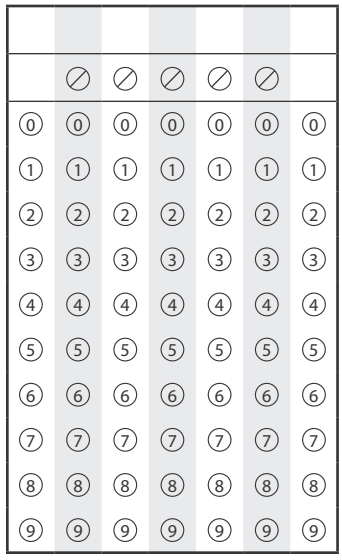
What is the most common amount of rainfall? How can you tell?

Part B

How many dots will there be in a line plot of rainfalls 4 millimeters and above?



13. What is the sum of 373 + 568?



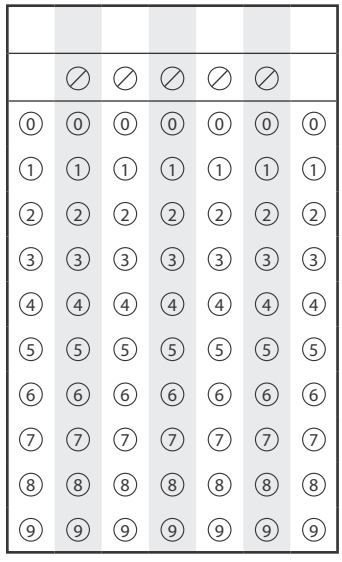
14. Mr. Lowe goes shopping for groceries 2 times a month and for clothes 1 time a month. How many times did Mr. Lowe go shopping in the last 9 months?

Part A

Write an equation to solve this problem. Let *x* be the number of times he went shopping.

Part B

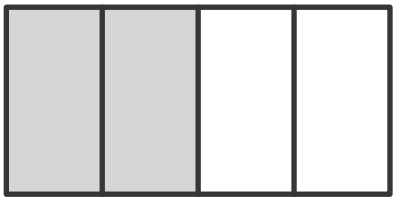
Solve the equation for *x*.



15. A number was rounded to the nearest 100 and the result was 600. What is the largest value the number could be?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

16. Yanna says that $\frac{4}{2}$ of the figure is gray. Is she correct? Explain.



17. Select the expression that can help you solve 7×6.

Ⓐ $(3 + 4) \times (6 + 1)$

Ⓑ $(3 \times 3) + (3 \times 4)$

Ⓒ $(6 + 7) \times (6 + 7)$

Ⓓ $(3 \times 6) + (4 \times 6)$

18. The four square court at Moe's school has both a length and width of 16 feet.

Part A

In square feet, what is the area of the four square court?

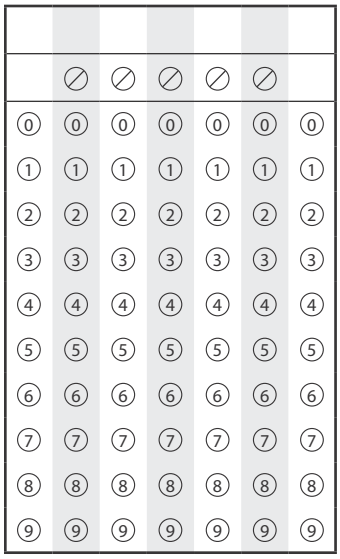
	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

Part B

Moe's school also has a large sandbox. It has the same area as the four square court, but it has a different perimeter. Select all that could be the length and width of the sandbox.

- ☐ 14 ft long and 18 ft wide
- ☐ 10 ft long and 30 ft wide
- ☐ 8 ft long and 32 ft wide
- ☐ 12 ft long and 20 ft wide
- ☐ 64 ft long and 4 ft wide

19. At the school book fair, Marta sets up 5 display tables with 7 different books on each table. How many different books are needed for this display?



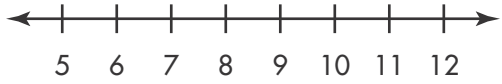
20. Ian says that when any number between 1 and 9 is multiplied by 2, the product is always an even number. Is this correct? Explain using an example.

21. Tina is making a square pattern. The area is 25 square inches. Can you tell what the perimeter of the pattern is? Explain.

22. Dorian has a bag of ribbons in different colors. The table shows the lengths of her ribbons.

Lengths of Ribbons	
Color	**Length (inches)**
Yellow	12
Blue	9
Red	6
Black	5
Green	10
Brown	6
Purple	9

Complete the line plot to show the lengths of Dorian's ribbons.



Lengths of Ribbons (inches)

23. Select all the equations that demonstrate the Associative Property.

- ☐ $7 \times 3 = 3 \times 7$
- ☐ $4 \times 8 = 32$
- ☐ $(7 \times 4) \times 2 = 7 \times (4 \times 2)$
- ☐ $4 \times (3 + 5) = (4 \times 3) + (4 \times 5)$
- ☐ $6 \times (9 \times 4) = (6 \times 9) \times 4$

24. What number multiplied by 4 is 32?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

25. Select all the terms that can be used to describe this shape.

- ☐ Polygon
- ☐ Square
- ☐ Quadrilateral
- ☐ Rhombus
- ☐ Rectangle

26. What is the product of 7 and 4? Write a related division equation.

27. Which of these comparisons are correct? Select all that apply.

- ☐ $\frac{2}{6} = \frac{2}{6}$
- ☐ $\frac{1}{4} < \frac{1}{8}$
- ☐ $\frac{5}{6} > \frac{5}{8}$
- ☐ $\frac{4}{4} < \frac{4}{6}$
- ☐ $\frac{2}{5} < \frac{2}{4}$

28. Kari was practicing for a piano recital. She practiced 20 days in a row for 40 minutes each day. How many minutes did Kari practice piano in all? Write an equation to solve this problem.

29. Kayla measures the area of her refrigerator with squares of paper that are each 1 square foot. Kayla measures the height from the bottom to the freezer door as 4 squares. From the freezer door to the top is 2 squares. The refrigerator is 3 squares wide. How many total squares of paper will cover the refrigerator?

30. Write and solve a multiplication equation for the array.

31. A sample of students are asked their favorite sport. The results are summarized in a frequency table.

Favorite Sport	
Sport	**Frequency**
Basketball	16
Soccer	24
Baseball	12

If you want to make a picture graph of these data, which key makes the most sense?

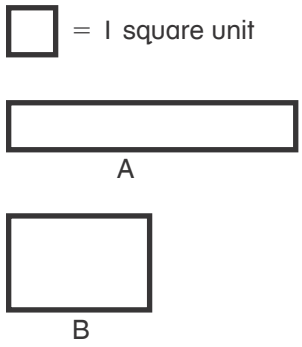
Ⓐ Each picture equals 2 students.

Ⓑ Each picture equals 4 students.

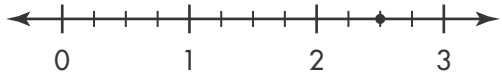
Ⓒ Each picture equals 6 students.

Ⓓ Each picture equals 8 students.

32. Which rectangle has a larger area? Explain how you know.



33. How many $\frac{1}{4}$s do you need to make $2\frac{1}{2}$? Use the number line below to help.



34. Adnan won the class prize of 25 stickers. He promised that he would divide the stickers equally between himself and four friends. How many stickers will each person receive?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

35. Janine made $20 per day mowing lawns for the last 7 days. How many dollars did Janine make mowing lawns in total?

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

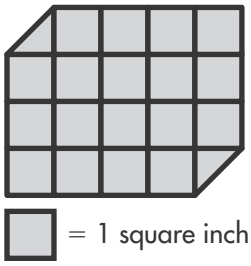
36. Divide the number line into 3 equal lengths. Then, mark and label the fraction $\frac{2}{3}$.

37. Solve 506 − 178.

	⊘	⊘	⊘	⊘	⊘	
⓪	⓪	⓪	⓪	⓪	⓪	⓪
①	①	①	①	①	①	①
②	②	②	②	②	②	②
③	③	③	③	③	③	③
④	④	④	④	④	④	④
⑤	⑤	⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨	⑨	⑨

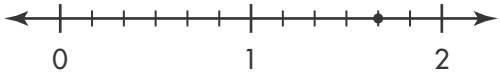
38. Draw a picture to show 30 divided by 5.

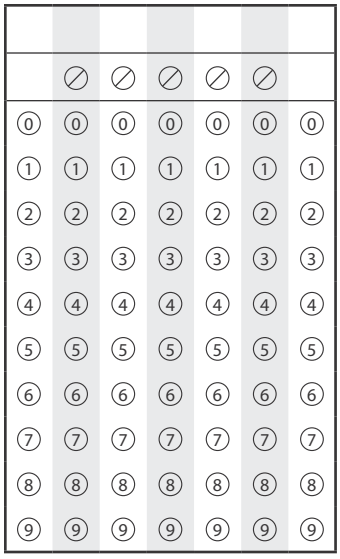
39. George claims that the area of the figure shown is 20 square inches. Is he correct? Explain.



= 1 square inch

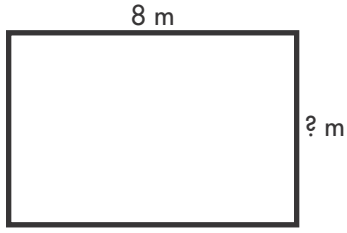
40. How many $\frac{1}{6}$s do you need to get $\frac{10}{6}$? Use the number line below to help.

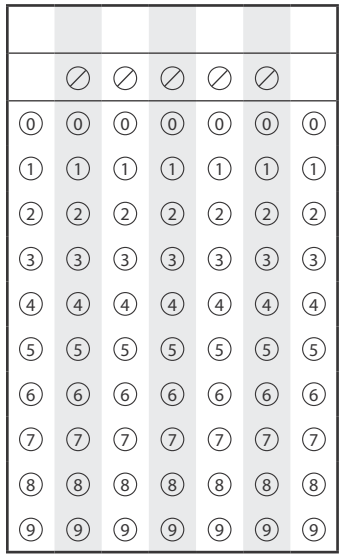




41. Divide the rectangle into 12 equal parts. What fraction does each part represent?

42. How many meters long is the missing side of this rectangle, if its area is 32 square meters?





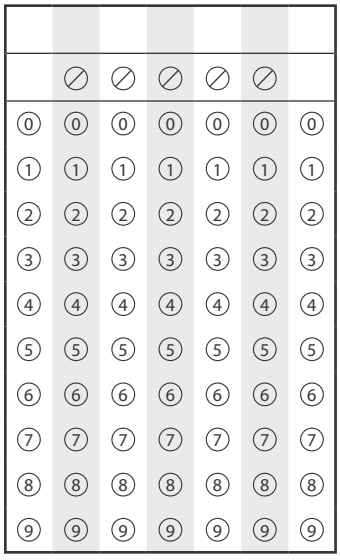
43. Write the correct symbol $<$, $=$, $>$ to compare each pair of fractions.

$\frac{1}{6}$ $\quad$ $\frac{1}{4}$

$\frac{4}{8}$ $\quad$ $\frac{4}{6}$

$\frac{2}{3}$ $\quad$ $\frac{4}{6}$

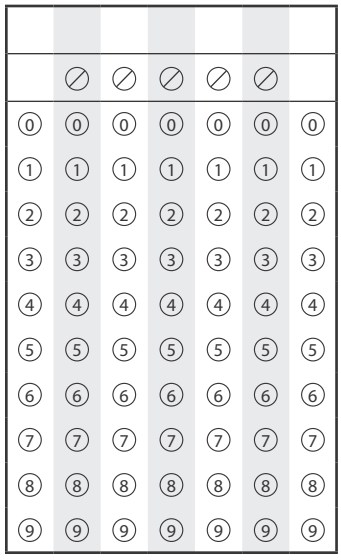
44. Fiona makes $5 for each pair of earrings she sells and $9 for each necklace she sells. How many pairs of earrings must Fiona sell to earn the same amount that she earns selling 10 necklaces?



45. Draw array showing the multiplication expression related to 35 divided by 7. Draw rectangles around the division groupings, and write the multiplication expression.

46. How do you know that a fraction is equivalent to 3? Give an example to prove your answer.

47. Two farms sell bunches of tomatoes. At Farm A, each bunch has 7 tomatoes. At Farm B, each bunch has 4 tomatoes. If you buy 8 bunches of tomatoes from each farm, how many more tomatoes will you buy from Farm A than from Farm B?



48. This week, Owen biked 9 kilometers after school each day. On Saturday he took a rest day, and then on Sunday he biked another 14 kilometers. How many kilometers did Owen bike in all this week?