

Rising Grade 6 Summer Math Packet

The problems in this packet are designed to help you review topics from previous mathematics courses that are essential to your success in grade 5. You are expected to bring this completed packet to class on the first day of school. In addition, this packet will count as part of your first-quarter grade. **Upon returning, you will be ASSESSED on the content of this packet.** All content outlined in the packet is grade 5 material. Neatly SHOW YOUR WORK!

1. Compare the values of the digit 8 in the number 6,084 and in the number 9,821.
2. Alysa buys 23 boxes of toothpicks for a school project. There are 255 toothpicks in each box. What is the total number of toothpicks, t , in all of the boxes? Write and solve an equation for t .

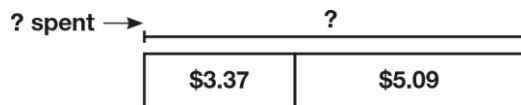
3. A. Select all of the partial products for 3.4×1.2 .

- ☐ $3.0 \times 1.0 = 3.00$
- ☐ $3.0 \times 0.4 = 1.20$
- ☐ $0.4 \times 1.0 = 0.40$
- ☐ $1.0 \times 0.2 = 0.20$
- ☐ $3.0 \times 0.2 = 0.60$
- ☐ $0.4 \times 0.2 = 0.08$

- B. What is 3.4×1.2 ?

4. Tyrel spent \$3.37 on lunch. Daniel spent \$5.09 on lunch. Use the models provided and mental math to answer the questions.

- A. What was the total amount that the two boys spent on lunch?



- B. How much more did Daniel spend on lunch than Tyrel? Explain how the diagram helps you find the answer.
5. Patrick walks 0.78 mile each day.
 - A. How far will he walk in all if he walks this distance each day for 14 days?
 - B. How could you use either multiplication or addition to solve this problem?

6. Select all the equations that 10^5 makes true.

☐ $7 \times \square = 70,000$

☐ $\square \times 5 = 500,000$

☐ $\square \times 3 = 150,000$

☐ $4 \times \square = 400,000$

☐ $\square \times 9 = 450$

7. A department store sells 152 pairs of jeans for \$29 each. Which is the best estimate of the total sales for the jeans?

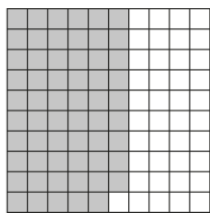
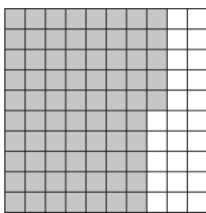
A \$3,000

B \$3,500

C \$4,000

D \$4,500

8. Each shaded area in the grids below represents a decimal.



A. What is the sum of the decimals?

B. Explain how you found your answer.

9. Mora ate 8.5 containers of yogurt one week. Each container held 5.4 ounces of yogurt.

A. How many ounces of yogurt did she eat in all?

A 40.2 ounces

B 42.0 ounces

C 45.9 ounces

D 76.5 ounces

B. Round the answer to A to the nearest ounce.

10. Write $>$, $<$, or $=$ in each circle to make the statements true.

20a. $5 + 2.063$ $7 + 0.603$

20b. $200 + 93.1000$ $200.050 + 93$

20c. $30.4 + 1.080$ $30.08 + 1.4$

20d. $0.2 + 0.06$ $0.15 + 0.150$

11. A farmer has 24 crates of plums ready to sell. Each crate contains 208 plums. How many plums does the farmer have in all? Use reasoning to explain how you can use estimating to check your answer.

12. Choose the correct product for each expression.

	74.3	7,430	743	0.743
7.43×10^2	☐	☐	☐	☐
743×0.1	☐	☐	☐	☐
74.3×0.01	☐	☐	☐	☐
0.743×10^4	☐	☐	☐	☐

13. The number 0.06 is $\frac{1}{10}$ of which decimal?

A 0.006

C 0.6

B 0.06

D 6.0

14. Brandon stands on a scale holding two boxes. The weight of Brandon and the boxes together is 61.56 pounds. Brandon's weight without the boxes is 53.28 pounds.

A. What is the combined weight of the two boxes that Brandon is holding? Draw and label a bar diagram to represent the problem.

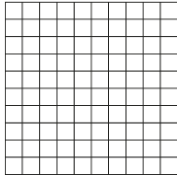
B. One of the boxes weighs 5.49 pounds. Describe a way to determine how much the other box weighs without using a scale. Then find the answer.

15. Find two decimals that are equivalent to $(5 \times 10^2) + \left(3 \times \frac{1}{100}\right)$. Write the decimals in the box.

50.003 500.030 50.300 500.003
50.30 500.03

16. Nick and his classmates set a goal of reading 8,000 pages in 18 weeks. The first week they read 398 pages. Nick says, "Since $400 \times 20 = 8,000$, we will reach our goal if we read 398 pages each week for 18 weeks." Do you agree with Nick? Explain.

17. Evan wants to find 0.8×0.9 .
- A. Use the hundredths grid to model the problem.



- B. What is the product? Explain how you used the grid to find the answer.

18. What is the sum?
 $0.38 + 7.5 + 10.36$

- A 7.88
 B 11.49
 C 18.14
 D 18.24

19. Leah buys 32 strips of ribbon. Each strip is 11.2 inches.

- A. Estimate the total length of ribbon that Leah buys. Write an equation to show your work.

- B. What is the exact total length of ribbon that Leah buys?
 _____ inches

20. Analyze the chart.

3.042	3.043	3.044	3.045	3.046
3.052	?	3.054	3.055	3.056
3.062	3.063	3.064	3.065	3.066

- A. Use structure to describe the pattern for moving from left to right across the chart.
- B. Use structure to describe the pattern for moving from top to bottom down the chart.
- C. What is the missing decimal in the chart? How can you tell?

21. Ryan had \$36.24 in his wallet. He spent \$8.36 at the bookstore and \$15.97 at a deli. Estimate the amount of money he has left. Find the exact amount he has left.

22. The mass of a quarter is 5.67 grams. The mass of a dime is 0.4 times the mass of a quarter.

A. What is the mass of a dime?

B. Explain how you found your answer.

23. What is the value of 7.239×10^4 and what is equivalent to multiplying a number by 10^4 ?

24. What number is $\frac{1}{10}$ the value of 237?

25. Circle the two numbers that round to 264.5 when rounded to the nearest tenth.

264.437

264.461

265.518

264.562

264.409

264.549

26. Write each expression in the correct box to show products less than $1\frac{3}{5}$ and those greater than $1\frac{3}{5}$. Explain how you found your answer.

$$1\frac{3}{5} \cdot \frac{1}{3} \quad 1\frac{2}{3} \cdot 1\frac{3}{5} \quad \frac{3}{4} \cdot 1\frac{3}{5} \quad 1\frac{3}{5} \cdot 1\frac{1}{4}$$

Less than $1\frac{3}{5}$	Greater than $1\frac{3}{5}$

27. A bakery receives an order for 1,600 cookies. If 12 cookies are packed in each bag, will 132 bags be enough? Show your work in the box.

28. What is equivalent to

$$(7 \times 100) + (5 \times 1) + \left(8 \times \frac{1}{10}\right)$$

$$+ \left(1 \times \frac{1}{100}\right)?$$

Explain why 75.81 is **NOT** equivalent to the given expression.

29. Which of the following will be true when 10^4 is used?

A $634 \times \square = 6,340,000$

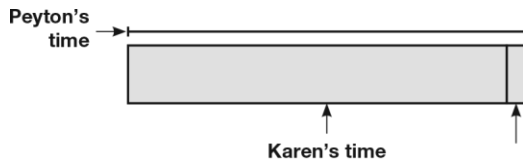
B $\square \times 40 = 4,000$

C $8 \times \square = 800,000$

D $\square \times 95 = 9,500$

30. Karen, Peyton, and Annie all ran in a race. Karen ran the race in 43.52 seconds.

A. Peyton's time running the race was 2.17 seconds more than Karen's time. What was Peyton's time? Complete the bar diagram to help you.



B. Annie's time running the race was 4.08 seconds less than Karen's time. Her goal was to complete the race in less than 39.50 seconds. Did she meet her goal? How can you tell?

31. Write $>$, $<$, or $=$ in each circle to make the statements true.

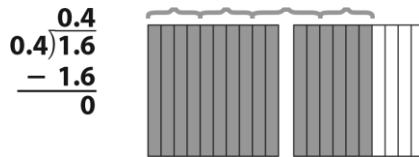
11a. $12.07 + 7.107$ $18.009 + 1.15$

11b. $405 + 0.200$ $400 + 5.20$

11c. $200.09 + 63.09$ $250 + 13.090$

11d. $87.3 + 8.008$ $60.02 + 35.3$

32. Sylvan solved a division problem below. He made a mistake in his method.



$1.6 \div 0.4 = 0.4$ $1.6 \div 0.4 = 4$

A. What is the mistake that Sylvan made solving the problem?

B. Show how you would correct the error.

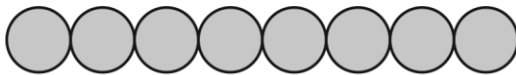
33. Find $\frac{1}{3} - \frac{1}{4}$. Show your work.

34. A market has 648 apples packaged in bags with 12 apples each. Write an equation to determine the number of bags and solve. Write a number in each box to determine the number of bags.

ten(s) + =

12	648 -600 48 -48

35. Lashaya decides to jog 8 miles. She is only able to jog $\frac{5}{16}$ that distance. Use the model to show how far Lashaya was able to jog. Then write the equation that represents the problem and solve.



36. Which shows a correct set of steps for adding $6\frac{1}{3}$ and $2\frac{1}{12}$?

A $\begin{array}{r} 6\frac{1}{3} = \frac{6}{3} \\ + 2\frac{1}{12} = \frac{2}{12} \\ \hline 2\frac{1}{6} \end{array}$	B $\begin{array}{r} 6\frac{1}{3} = 6\frac{5}{12} \\ + 2\frac{1}{12} = 2\frac{1}{12} \\ \hline 8\frac{2}{3} \end{array}$
C $\begin{array}{r} 6\frac{1}{3} = 6\frac{18}{12} \\ + 2\frac{1}{12} = 2\frac{1}{12} \\ \hline 9\frac{7}{12} \end{array}$	D $\begin{array}{r} 6\frac{1}{3} = 6\frac{4}{12} \\ + 2\frac{1}{12} = 2\frac{1}{12} \\ \hline 8\frac{5}{12} \end{array}$

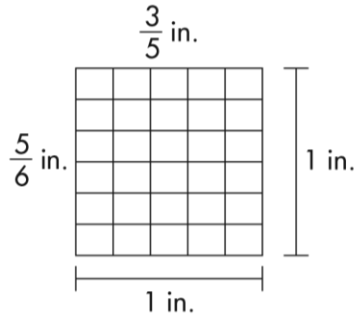
37. The table shows masses of different types of nuts that Nathan buys. He plans to mix the nuts and then separate them into bags. Each bag will have 1.2 kg of nuts in it. He wants to know how many bags of mixed nuts he can fill.

Type of Nut	Mass (kg)
Almonds	3.64
Cashews	2.79
Peanuts	3.44
Pine Nuts	2.73

- A.** Explain the steps you need to take to solve this problem.
- B.** Write an equation and draw a bar diagram to show each step.

C. How many bags of mixed nuts will Nathan fill? How can you tell the last bag will be only partially filled?

38. Find the area of a rectangle with side lengths $\frac{3}{5}$ inch and $\frac{5}{6}$ inch. Use the drawing to show your work. What equation does the drawing represent?

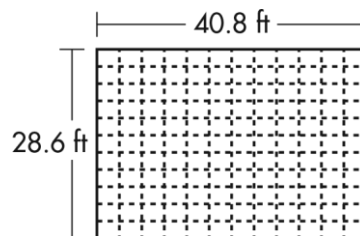


39. Sean is getting gas for his car. The car's 12-gallon tank is $\frac{1}{4}$ full. Gas costs \$2.449 per gallon. To the nearest cent, how much will it cost Sean to fill the tank?

40. Select each true statement.

- ☐ $660 \div 30 = 23$
- ☐ $780 \div 60 = 13$
- ☐ $7,600 \div 40 = 190$
- ☐ $6,300 \div 20 = 310$
- ☐ $500 \div 50 = 20$

41. Students are dividing their school's garden into plots.

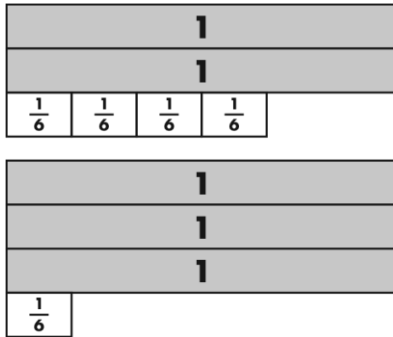


- A. The garden's length is 40.8 feet. It will be divided into 12 sections across. How long is each section? Show your work.
- B. The garden's width is 28.6 feet. It will be divided into 11 sections. How wide is each section? Show your work.

42. Which of the following expressions could **NOT** be changed to have a denominator of 20 in order to solve?
- A $\frac{9}{5} - \frac{12}{16}$ C $\frac{8}{16} - \frac{2}{5}$
- B $\frac{1}{5} - \frac{3}{18}$ D $\frac{3}{4} - \frac{22}{40}$
43. An auditorium has 644 seats. Each row has 23 seats. How many rows are in the auditorium? Use estimation to show that your answer is reasonable.
44. To calculate $735 \div 100$, how many decimal places to the left should the decimal point in 735 move? What is $735 \div 100$?
45. Luke hiked $6\frac{1}{4}$ miles. Joana hiked $2\frac{1}{5}$ times as far. How far did Joana hike? Write an equation to model your work.
46. In Sara's class, $\frac{2}{5}$ of the students ride a bus, and $\frac{1}{3}$ ride a car to school. The rest walk to school.
- A. Explain how you can find the fraction of students who walk to school.
- B. Find the fraction of students who ride a bus or car to school. Draw a diagram and use an equation to find your answer.
- C. Find the fraction of students who walk to school. Draw a diagram and use an equation to find your answer.
47. Find the product of $\frac{3}{8}$ and $\frac{4}{5}$. Draw a model to explain your work.
48. Use equivalent fractions to find the sum of $\frac{2}{15}$ and $\frac{3}{5}$. Show your work.
49. Mary has $7\frac{1}{6}$ yards of cloth. She uses $3\frac{1}{4}$ yards. She claims that she has $4\frac{1}{2}$ yards of cloth left. Do you agree? Explain.

50. Ariana bought 7 muffins. She paid a total of \$13.02. How much did she pay for each muffin? Explain your answer.

51. Ethan studied for $2\frac{2}{3}$ hours on Monday and $3\frac{1}{6}$ hours on Tuesday. He used the fraction strips shown below to model the total number of hours he studied.



A. Explain why he modeled $2\frac{2}{3}$ using $\frac{1}{6}$ strips instead of $\frac{1}{3}$ strips.

B. What is the total number of hours that Ethan studied on Monday and Tuesday?

52. Use 10 or $\frac{1}{10}$ to complete the statements that follow.

0.03 is times 0.003.

0.009 is times 0.09.

0.50 is times 0.05.

53. Brooke played her flute for $\frac{3}{4}$ hour each day for 5 days and for $\frac{1}{2}$ hour each day for 2 days. How many hours did she play it in all?

54. Find the product of 3.68 and 12. Explain how you know where to place the decimal point in your answer.

55. Write a number in each space to find the quotient $592 \div 16$.

ten(s) + =

16 $\begin{array}{r} 592 \\ -480 \\ \hline \end{array}$	$\begin{array}{r} 112 \\ -112 \\ \hline \end{array}$
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$592 \div 16 =$

56. Jenny drank 2.4 liters of water on Friday and twice that amount on the weekend. How many milliliters did she drink in all?

57. Select the correct product for each expression on the left.

	6.02	4.56	4.26	4.59
3.04×1.5	☐	☐	☐	☐
1.2×3.55	☐	☐	☐	☐
1.72×3.5	☐	☐	☐	☐
3.06×1.5	☐	☐	☐	☐

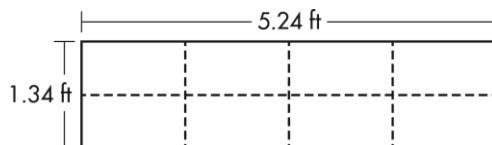
58. Which number makes the equation true?

$3.15 +$ $= 10.27$

- A** 7.12
B 7.32
C 13.12
D 13.42

59. Is the equation $\frac{1}{8} + \frac{8}{5} = \frac{13}{20}$ correct? Explain.

60. Isabella has a board that is 5.24 feet long and 1.34 feet wide. Below, the diagram shows how she plans to cut the board into eight pieces of equal size.



- A.** How long will each piece be? Write an equation to show your work.

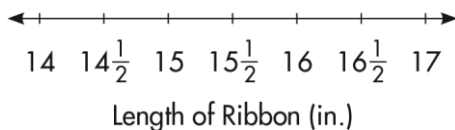
B. How wide will each piece be? Write an equation to show your work.

61. Bottles of water are packaged with 24 bottles per case. A store has 365 cases to sell. How many bottles of water does the store have to sell?

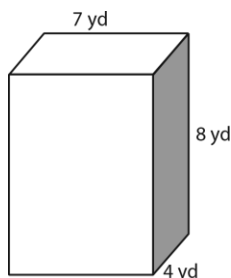
62. Arnold has 4 cups of trail mix. He wants to divide the trail mix into $\frac{1}{3}$ -cup servings. How many $\frac{1}{3}$ -cup servings are there in 4 cups? Explain how you found your answer.

63. Mia cut ribbon into different pieces. The table shows the lengths of the pieces. Complete the line plot for the data set.

16	$16\frac{1}{2}$	17	$14\frac{1}{2}$	$15\frac{1}{2}$	$16\frac{1}{2}$
17	$16\frac{1}{2}$	$15\frac{1}{2}$	14	17	$16\frac{1}{2}$



64. A bank vault has the dimensions shown in the figure below. Write two expressions you can use to find the volume of the bank vault. Then find the volume of the bank vault.



65. Craig is riding a bicycle along a trail.

A. After bicycling for 3 miles 650 yards, Craig stops to rest. How far has he traveled in yards?

yards

B. The total length of the trail is 5 miles 880 yards. How many total yards is the trail?

yards

66. Determine which two whole numbers each quotient is between and write the expression in the appropriate box below.

$380 \div 70$

$470 \div 90$

$530 \div 70$

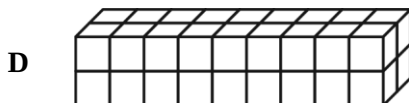
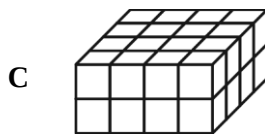
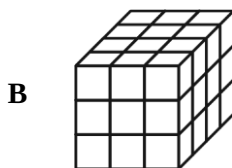
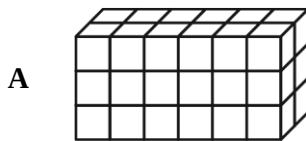
$620 \div 80$

$230 \div 40$

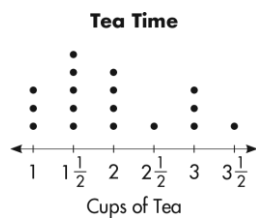
$460 \div 60$

Between 5 and 6	Between 7 and 8

67. Each cube in the figures below is one cubic unit. Which figure does **NOT** have a volume of 36 cubic units?



68. The line plot shows the number of cups of tea that each person at a small cafe drank during tea time one day. Select all statements about the data that are true.



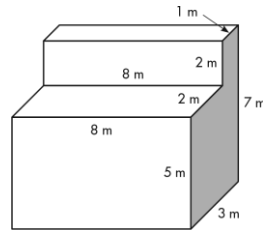
- ☐ Most people drank more than $2\frac{1}{2}$ cups of tea.
- ☐ The same number drank 1 cup of tea as drank 3 cups.
- ☐ The same number drank $1\frac{1}{2}$ Cups of tea as the total who drank 2 or $2\frac{1}{2}$ cups.
- ☐ The number of cups that people drank most often was $1\frac{1}{2}$ cups of tea.
- ☐ A total of 18 people drank tea.

69. Zoe says $1\frac{2}{5}$ is equal to $5 \div 7$. Is she correct? Explain.

70. Ingrid's baby brother weighed 6 pounds 6 ounces when he was born. He has gained 1 pound 3 ounces since then. What is her baby brother's current weight, in ounces?

ounces

71. The outdoor monkey cage at a zoo has the size and shape shown below.



A. Write an expression for the total volume of the cage.

B. What is the volume of the cage?

72. Complete each conversion by writing the correct number in the box. Each number may be used more than once or not at all.

2.5 25 250 2,500 25,000

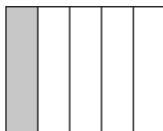
25 m = cm

25 kg = g

2,500 mm = cm

2,500 mL = L

73. Liana wants to use $\frac{1}{5}$ of her garden for tomatoes, as shown by the shaded part of the diagram.



A. Six tomato plants will each take up the same amount of space. Draw lines on the diagram to show how she could divide the area into equal spaces for the tomato plants.

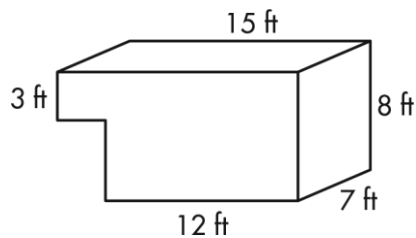
B. What fraction of the garden will each tomato plant take up?

74. Select the equivalent measurement for the given measurements on the left.

	$12\frac{1}{4}$ gallons	25 cups	$10\frac{1}{2}$ gallons	132 fl. oz
$16\frac{1}{2}$ cups	☐	☐	☐	☐
196 cups	☐	☐	☐	☐
$12\frac{1}{2}$ pints	☐	☐	☐	☐
42 quarts	☐	☐	☐	☐

75. A moving truck has the cargo space shown in the figure.

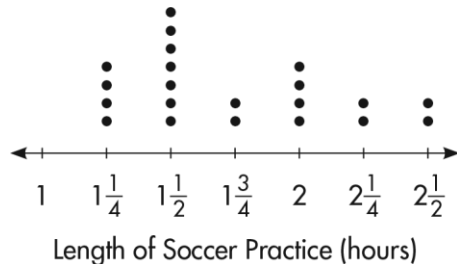
A. Select all expressions that could be used to find the volume of the cargo space.



- ☐ $8 \times (12 + 7) + 3 \times (7 + 3)$
☐ $3 \times (7 + 15) + 12 \times (8 + 5)$
☐ $(7 \times 3 \times 3) + (12 \times 7 \times 8)$
☐ $(12 \times 7 \times 5) + (3 \times 7 \times 15)$
☐ $(15 \times 7) + (12 \times 8) + (3 \times 7)$

B. What is the volume of the cargo space?

76. The line plot shows how long each practice was for a soccer team this season.



Use an equation to find the total number of hours the team practiced.

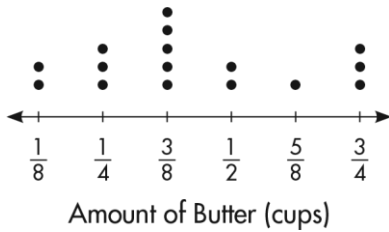
77. Write numbers in the boxes to make each equation true.

$$7 \div \frac{1}{\square} = 28$$

$$\square \div \frac{1}{6} = 48$$

$$4 \div \frac{1}{9} = \square$$

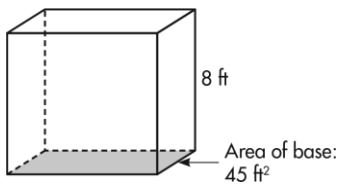
78. The line plot shows the amount of butter that a baker used in different muffin recipes.



The baker concludes that the recipes required a total of $\frac{52}{8}$ or $6\frac{1}{2}$ cups of butter. Do you agree? Write and solve an equation that supports your answer.

79. A soup recipe calls for 2.25 grams of chili powder. How many milligrams of chili powder are needed if the recipe is doubled?

80. The diagram shows the dimensions of a storage room.



- A. Which expression can be used to find the volume of the room?

- A $(8 + 8) \times 45$
- B 45×8
- C $(8 \times 8) + 45$
- D $45 + 8 + 45 + 8$

- B. Wyatt is building a model of the room. The base of the model is 45 square units and the height is 8 units. How can he use unit cubes to find the volume?

81. Choose the correct product for each expression given on the left.

	9,030	9,541	9,361	9,360
602×15	☐	☐	☐	☐
208×45	☐	☐	☐	☐
407×23	☐	☐	☐	☐
203×47	☐	☐	☐	☐

82. Juan answered 6 questions incorrectly on his math test. Lucas incorrectly answered $\frac{2}{3}$ of the number that Juan answered incorrectly.

A. Explain how you know that Juan answered more questions incorrectly on the test than Lucas without multiplying.

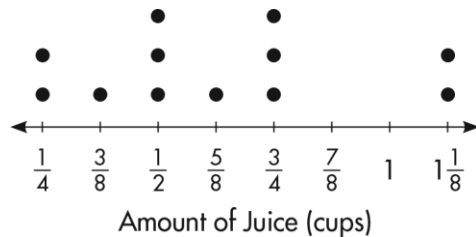
B. How many questions did Lucas answer incorrectly on the test?

83. Don bought the furniture listed below. He paid \$500 and will make monthly payments of \$85 for the remaining amount. How long will it take to pay for the furniture?

Furniture	Cost
Sofa	\$445
Chair	\$210
Table	\$525

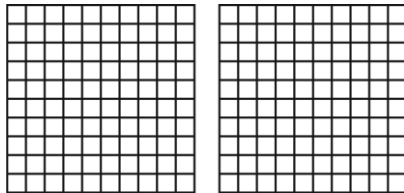
- A 8 months C 13 months
B 9 months D 14 months

84. Tiana makes punch by mixing 12 different types of juice together. The line plot shows the number of cups of each type of juice that she uses.



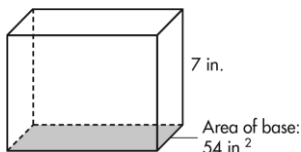
How many cups of punch did Tiana make in all? Show your work.

85. A. A path around a pond is 0.55 miles. Dylan walks around the pond 3 times. How far does he walk? Shade the grids to model the problem.



B. Pat walks around the pond twice. How far did Pat and Dylan walk in all?

86. Maylin is mailing a package that has the size shown below. What is the volume of the package? Write the expression you used to find the volume.



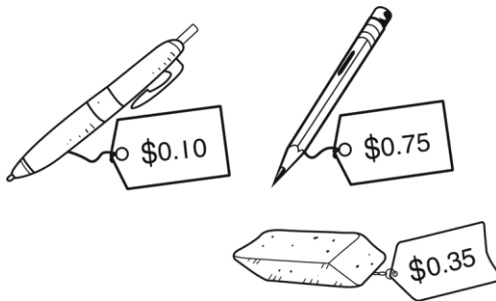
87. Which numerical expression represents the following calculation?

Add 12.60 to the quotient of 1.50 and 2.

- A** $12.60 + 1.50 - 2$
- B** $12.60 + 2 \times 1.50$
- C** $12.60 + 1.50 \div 2$
- D** $12.60 \div 2 \times 1.50$

88. A stack of 12 pennies is 18.24 millimeters high. How thick is each penny? How thick would a stack of 20 pennies be?

89. The school store sells the items shown below.



Jenna has \$5.00. She buys one of each item. How much money does she have left?

- A** \$3.90 **C** \$3.75
- B** \$3.80 **D** \$3.70

90. Claim: a rectangle can be cut into two isosceles triangles. Do you agree? Draw a diagram to support your answer.

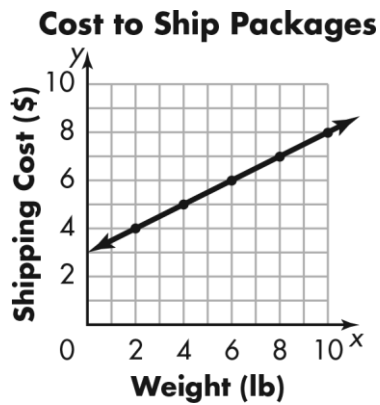
91. Select each true statement.

- ☐ All squares are rectangles.
- ☐ All quadrilaterals are parallelograms.
- ☐ All trapezoids are quadrilaterals.
- ☐ All parallelograms are rectangles.
- ☐ All rhombuses are squares.

92. Insert parentheses to make the statement true.

$$18 - 12 \times 5 + 4 \times 2 = 38$$

93. What is the shipping cost for a package weighing 8 pounds? Use the graph below.



94. Select each true statement.

- ☐ $204.640 > 204.215$
- ☐ $58.300 = 58.30$
- ☐ $941.705 > 941.74$
- ☐ $2.061 > 2.3$
- ☐ $54.06 = 54.60$

95. Anna and Jayla are reading the same book. Anna is on page 150 and reads 7 pages a day. Jayla is on page 110 and reads 15 pages a day. After how many days will Anna and Jayla have read the same number of pages? Explain.

96. Which expression is NOT equal to 36?

- A** $(48 \div 8) \times 3 + 2$
- B** $(9 + 9 \div 3) \times 3$
- C** $3 \times (16 - 4 \times 1)$
- D** $(22 - 2 \times 5) \times 3$

97. For each sentence, select a word that will make the statement true, and write the word in the box.

Always sometimes never

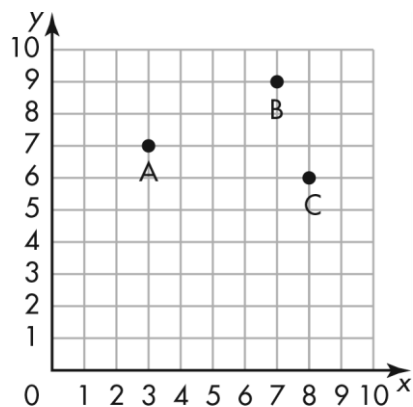
Right triangles are isosceles triangles.

Obtuse triangles are acute triangles.

Scalene triangles are obtuse triangles.

Equilateral triangles are acute triangles.

98. Write a number in each box to identify the coordinates of each point.



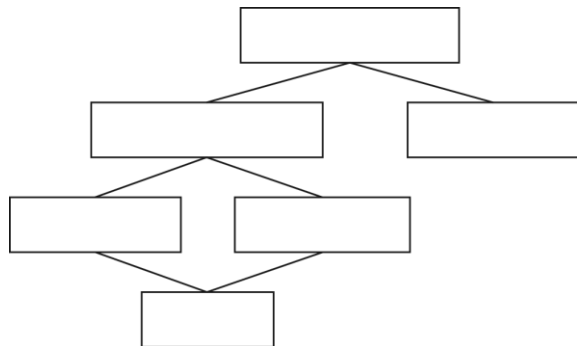
A: (,)

B: (,)

C: (,)

99. Write each figure name in the correct box to show how the figures are related. Each name will be used only once.

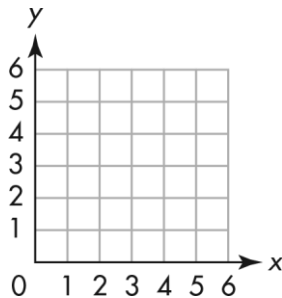
parallelograms	quadrilaterals	rectangles
rhombuses	squares	trapezoids



100. Write a numerical expression that represents the following calculation.

Subtract 9 from the quotient of 48 and 4.

101. Three vertices of a triangle are located at A (5, 4), B (3, 1), and C (2, 5). Graph and label each of the three vertices.



102. Alisha and Peter both make batches of granola, but they use different recipes. Alisha's recipe uses 3 cups of oats. Peter's recipe uses 5 cups of oats.

A. Complete the table to show the amount of oats that each person uses for different numbers of batches.

Number of Batches	Cups of Oats Used by Alisha	Cups of Oats Used by Peter
1		
2		
3		
4		

B. Write a number in each box to form an ordered pair that describes the amount of oats each person will use to make 7 batches. The first number should be the amount of oats that Alisha will use, and the second number should be the amount of oats that Peter will use.

(,)

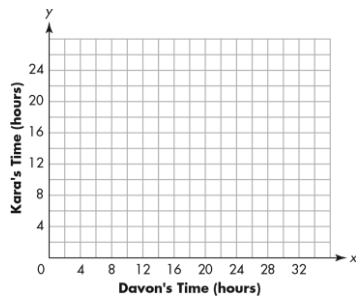
103. Each week, Devon will work 6 hours and Kara will work 4 hours.

A. Write a number in each box to complete the ordered pairs showing the total number of hours that Devon and Kara will have worked after each week.

(6, 4), (12,) , (, 12),

(24, 16), (,)

B. Plot the ordered pairs on the graph.



104. Which expression represents a number that is three times as great as the product of 14 and 9?

A $3 + (14 \times 9)$

B $(14 + 9) \times 3$

C $3 \times (14 \times 9)$

D $(14 \times 9) \div 3$

105. Use each number in the box below to complete the equations that follow.

2	4	6	8
---	---	---	---

$(36 \div \text{□}) + (8 \div \text{□}) = 7$

$(\text{□} \times 5) - \text{□} = 6$

106. Write a numerical expression that represents the following calculation.

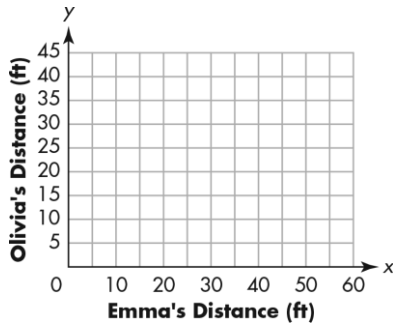
Multiply 4 by the sum of 2, $3\frac{1}{2}$, and 1.

107. Emma and Olivia are both running toward a bench. Emma is 50 feet from the bench and gets 6 feet closer each second. Olivia is 35 feet from the bench and gets 4 feet closer each second. The table shows the distances of both runners from the bench after the first 4 seconds.

Distance from Bench (ft)

Hour	Start	1	2	3	4
Emma	50	44	38	32	26
Olivia	35	31	27	23	19

Graph the data for the distance of each runner from the bench. Draw a line to connect the data points, and extend the line to show the distances as each runner approaches the bench. How far will Emma be from the bench when Olivia is 15 feet from it?



108. The tables below show the water level two identical tanks would have if each were filled using different pipes.

Pipe 1

Rule: Add 4 centimeters each hour.

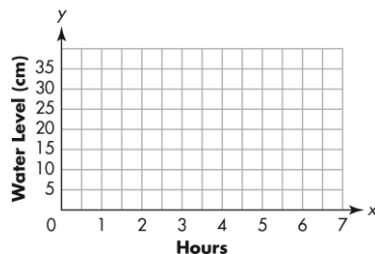
Hour	1	2	3	4
Level (cm)	4	8	12	16

Pipe 2

Rule: Add 7 centimeters each hour.

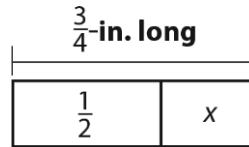
Hour	1	2	3	4
Level (cm)	7	14	21	28

- A. Plot the ordered pairs from each table on the coordinate grid. Then draw and label a line segment connecting each set of ordered pairs to compare the data.



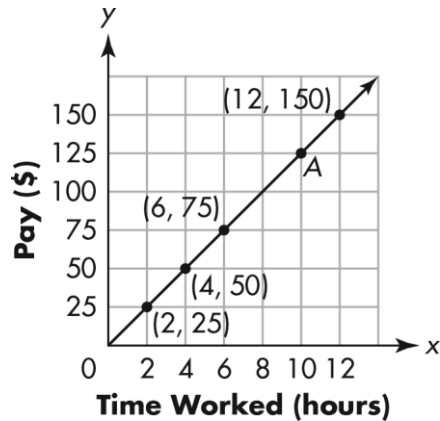
- B.** How much deeper would the water level be after 5 hours in the tank filled using Pipe 2 than the tank filled using Pipe 1?

- 109.** The adult leaf-footed bug is about $\frac{3}{4}$ -inch long. The adult thorn bug is about $\frac{1}{2}$ -inch long. The model shows how the lengths of the bugs are related.



How much longer is the leaf-footed bug than the thorn bug? Show your work.

- 110.** The graph shows Jacob's pay for working different numbers of hours.



- A.** What are the coordinates of Point A on the graph?
- B.** What does the ordered pair for Point A represent?