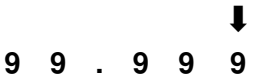
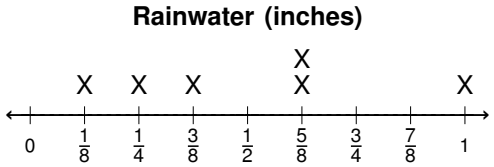
1. The arrow points to one digit.



Describe the digit in relation to the others.

2. Marina and Jacob collected rainwater in six different locations on one day. The amount of rainwater collected in each location is shown on the line plot.



If redistributed equally, how much rainwater will there be in each container?

3. 100 grams is half the mass of object A and twice the mass of object B.

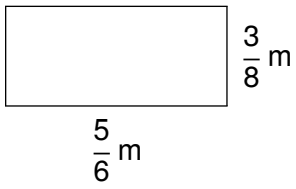
The heaviest object is how many grams more than the lightest one?

4. Sally has 5 bins of pinto beans. Each bin weighs $31\frac{4}{5}$ pounds. To find how many pounds in all, Sally writes an equation.

$$31\tfrac{4}{5} \times 5 = ?$$

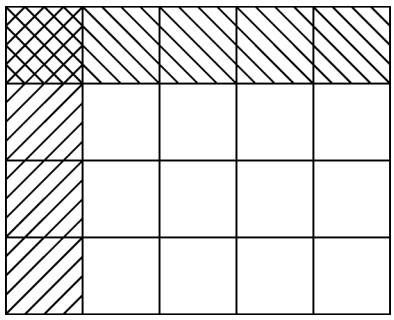
Using the distributive property, explain how Sally can solve this problem.

5. Stefan measured the length and width of a compost bin.



What is the area of the compost bin?

6. Use the model to complete the number sentence.



$$\frac{1}{5} \times \frac{1}{4} = \square$$

a) $\frac{1}{20}$ b) $\frac{1}{9}$ c) 1 d) $\frac{9}{20}$

7. A box has a base which measures 3 feet by 2 feet. If its volume is 30 cubic feet, what is its height?

a) 2 ft b) 3 ft c) 4 ft d) 5 ft

8. What is the value of the expression below if $c = 8$?

$$18 - (c + 4)$$

a) 6 b) 8 c) 14 d) 22

9. Look at the two products.

100×30

100×60

How do the products compare?

a) 100×30 is twice as much as 100×60 because 30 is twice as much as 60

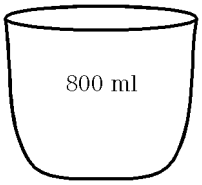
b) 100×30 is half as much as 100×60 because 30 is twice as much as 60

c) 100×60 is twice as much as 100×30 because 60 is twice as much as 30

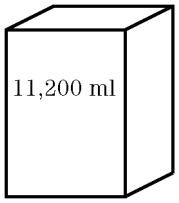
d) 100×60 is thirty times as much as 100×30 because 60 is thirty more than 30

10. Which container holds about 1 liter?

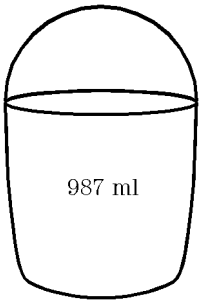
a)



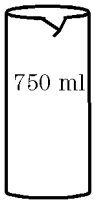
b)



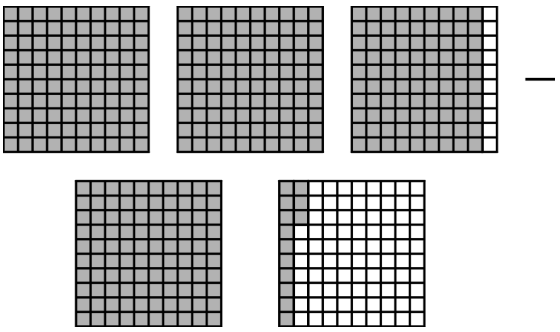
c)



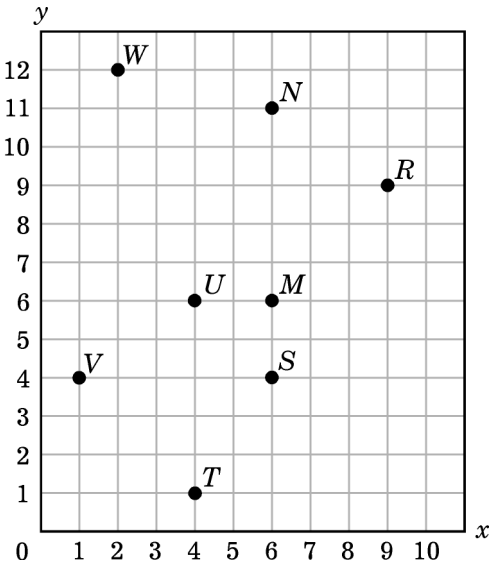
d)



11. Marty rode his bike 2.9 miles on Monday and 1.13 miles on Tuesday. How much farther did he ride on Monday?



12. The points on the grid represent the location of trees that have to be inspected for disease.



Mr. Hammerstein inspects the tree at point *N*. Then he goes 4 units left, 7 units down, and 4 units right.

What is the location of Mr. Hammerstein now?

a) (4, 6) b) (6, 4) c) (1, 4) d) (6, 6)

13. Payne wants to create a story problem to use the expression.

$$\frac{1}{6} \div 8$$

Which of the story problems can use the expression?

a) Each refrigerator weighs $\frac{1}{6}$ ton. If there are 8 refrigerators, how many tons in all?

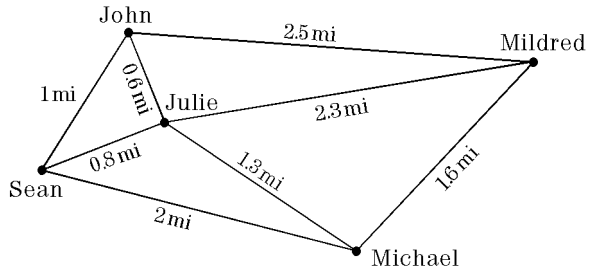
b) In the appliance store, $\frac{1}{6}$ of total sales were refrigerators. If 8 refrigerators were sold, what fraction of total sales was each refrigerator?

c) There are 8 loads of dishes to wash. If each load requires $\frac{1}{6}$ cup of dishwasher detergent, how many cups of detergent are needed?

d) There are 8 watches in each display case. Each display has $\frac{1}{6}$ total watches. How many watches in all?

14. John measured the distance to the house of each of his friends and drew the map shown. On Saturday he rode his bike to Julie's house, then to Sean's house and then he rode back to his house. How far did he ride his bike on Saturday?

a) 6.4 mi b) 5.4 mi c) 4.9 mi d) 2.4 mi



15. Birthday cards sell for $1.00 each. However, today they can be purchased in boxes of 5 for $0.75 per card. How much will it cost to buy 2 boxes of cards?

a) $3.75 b) $5.00

c) $7.50 d) $10.00

16. The Burkhart family served 12 buckets of fried chicken to guests at the barbeque. The guests ate $\frac{1}{7}$ bucket each.

How many guests ate chicken?

a) $\frac{12}{7}$ b) 19 c) 79 d) 84

17. The students in Mrs. Leander's class did an experiment. They each rolled a die one time and tallied the results.

die roll	students
	𝍸
	IIII
	𝍸 I
	IIII
	𝍸 I

Based on the results, what fraction of students rolled an *odd* number on the die?

a) $\frac{5}{28}$ b) $\frac{3}{14}$ c) $\frac{1}{2}$ d) $\frac{5}{6}$

18. A store clerk counts 7 boxes of green shirts and 6 boxes of yellow shirts. Each box of shirts contains 8 shirts. Which expression tells the total number of shirts in the boxes?

a) $(8 \times 6) + 7$ b) $8 \times (7 + 6)$

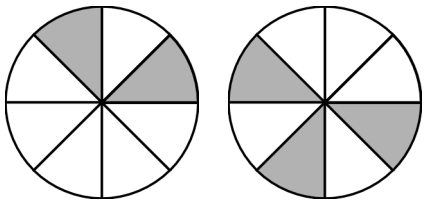
c) $8 + (7 \times 6)$ d) $(8 \times 7) + 6$

19. Susan bought a raincoat for $105.98. She calculated the tax to be $9.0083. What amount must she pay in taxes?

a) $9.00 b) $9.0083

c) $9.008 d) $9.01

20. Tomi and her friends ordered two pizzas for dinner. The shaded areas show how much they ate. What fraction of the total did they eat?

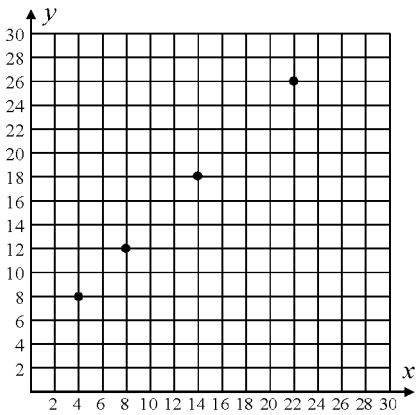


cheese pizza pepperoni pizza

a) $\frac{5}{6}$ b) $\frac{5}{8}$ c) $\frac{17}{24}$ d) $\frac{5}{14}$

21. Mrs. Spillman bought a bag of candy that weighed 2.48 pounds. She said that 1.5 pounds of the candy was chocolate. How much of the candy was not chocolate? Use a decimal manipulative to build a model.

22. Which rule is used to solve for y in the ordered number pairs on the graph?



a) $x - 3$ b) $x \cdot 3$ c) $x + 4$ d) $x \div 4$

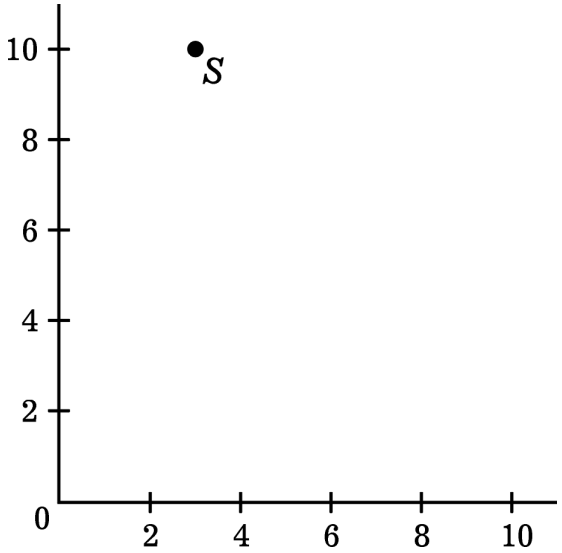
23. Erin's baseball team went to the local ballpark to watch the playoff game. While there, some of the team members decided to get some snacks. The choices are shown on the menu:

Hot dogs $2
Hamburgers $3
French fries $2
Soda $0.75
Candy $0.50

When the tickets were purchased, the group received a special of $1 off of each hamburger or hot dog purchased.

Write a numerical sentence that represents the final cost if the group orders 3 hot dogs, 4 burgers, 7 sodas, and 4 fries. Use parentheses in your sentence.

24.



Name the ordered pair for point *S*.

a) (9, 3)
b) (3, 9)
c) (10, 3)
d) (3, 10)

25. The scale for luggage at the airport rounds to the nearest hundredth of a pound. If the scale reads 25.82 pounds for a piece of luggage, which of the following is possible for its real weight?

a) 25.8
b) 25.821
c) 25.831
d) 26

26. Round the number 118,267,301 to the indicated place value.

hundreds _____

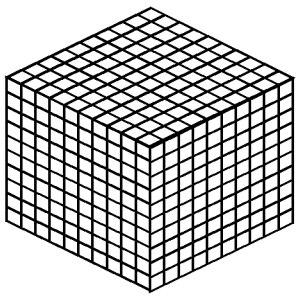
ten thousands _____

hundred thousands _____

ten millions _____

27. Mark shaded 0.011 on a thousandths cube. What fractional part did he shade?

a) $\frac{11}{10}$
b) $\frac{11}{100}$
c) $\frac{11}{1000}$
d) $1\frac{1}{1000}$



28. At a track meet, the girl's team recorded the following times in the 100 meter dash (in seconds):

Team Member	Time
Mary	5.67
Sue	6.75
Juanita	5.76
Shauna	7.65

What is the order of girls from fastest to slowest?

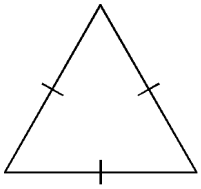
a) Mary, Shauna, Sue, Juanita

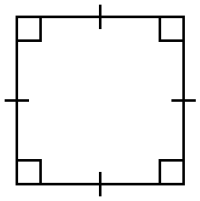
b) Mary, Sue, Juanita, Shauna

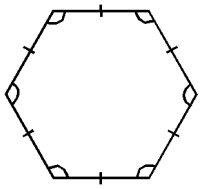
c) Juanita, Mary, Sue, Shauna

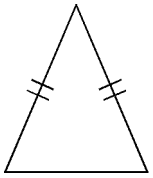
d) Mary, Jaunita, Sue, Shauna

29. Which of the following is *not* a regular polygon?

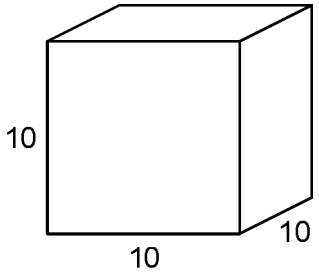
a) 

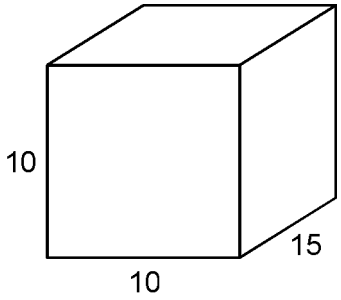
b) 

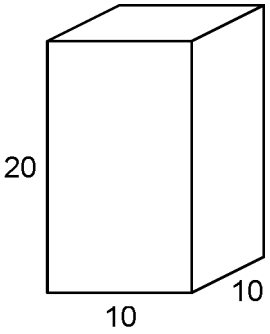
c) 

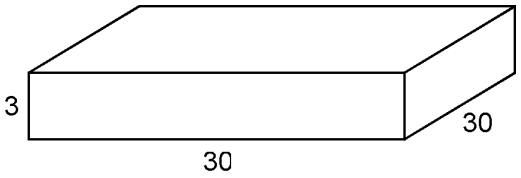
d) 

30. Fiona needs a box to use for a social studies project. The box needs to have a volume of 2,000 cubic inches. Which box will Fiona most likely choose?

a) 

b) 

c) 

d) 

31. Use these figures to answer the following question(s).

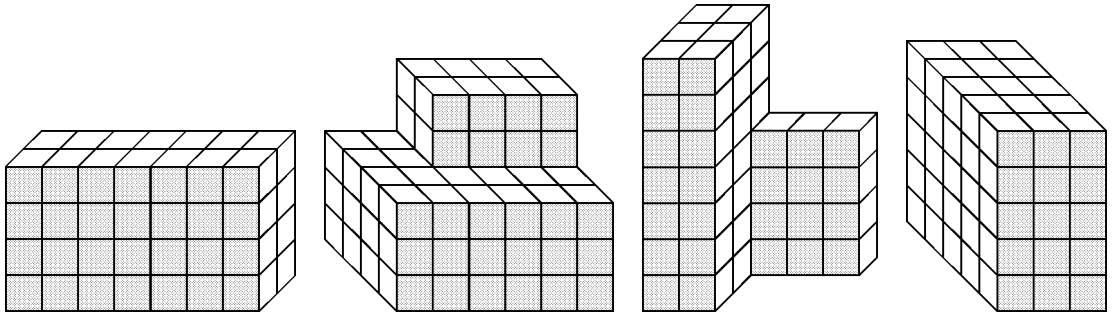


Figure 1 Figure 2 Figure 3 Figure 4

Each  = 1 cubic cm

Which of these statements is true about the volumes of the figures?

a) The volume of Figure 1 is 3 cubic centimeters more than Figure 4.

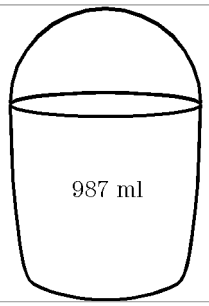
b) The volume of Figure 2 is 16 cubic centimeters greater than Figure 1.

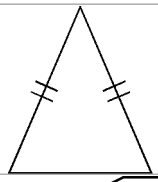
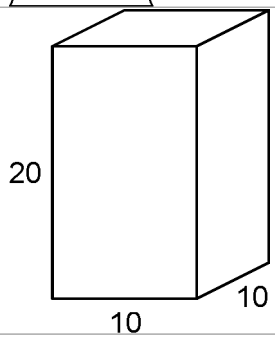
c) The volume of Figure 3 is 34 cubic centimeters more than the volume of Figure 2.

d) The volume of Figure 2 is 13 cubic centimeters greater than the volume of Figure 4.

Problem-Attic Sample Document
all items from CCSS Math Database

Grade 5

Num	Scoring	Standard	Answer
1		5.NBT.01	The digit is $\frac{1}{10}$ of the digit to the left.
2		5.MD.02	$\frac{1}{2}$ inch
3		5.MD.01	150 grams more
4		5.NF.06	[answers vary]
5		5.NF.04B	$\frac{5}{16}$ m^2
6	a	5.NF.04A	$\frac{1}{20}$
7	d	5.MD.05B	5 ft
8	a	5.OA.01	6
9	c	5.NF.05A	100×60 is twice as much as 100×30 because 60 is twice as much as 30
10	c	5.MD.01	
11		5.NBT.07	1.77 mi.
12	b	5.G.02	(6, 4)
13	b	5.NF.07A	In the appliance store, $\frac{1}{6}$ of total sales were refrigerators. If 8 refrigerators were sold, what fraction of total sales was each refrigerator?
14	d	5.NBT.07	2.4 mi
15	c	5.NBT.07	$7.50
16	d	5.NF.07B	84
17	c	5.NF.03	$\frac{1}{2}$
18	b	5.OA.02	$8 \times (7 + 6)$
19	d	5.NBT.04	$9.01
20	c	5.NF.02	$\frac{17}{24}$
21		5.NBT.07	.98 lbs
22	c	5.OA.03	$x + 4$
23		5.OA.02	[answers vary]
24	d	5.G.02	(3, 10)
25	b	5.NBT.04	25.821
26		5.NBT.01	118,267,300; 118,270,000; 118,300,000; 120,000,000

27	c	5.NBT.03A	$\frac{11}{1000}$
28	d	5.NBT.03B	Mary, Jaunita, Sue, Shauna
29	d	5.G.04	
30	c	5.MD.05B	
31	d	5.MD.05C	The volume of Figure 2 is 13 cubic centimeters greater than the volume of Figure 4.