End-of-Year Test

Part 1

Solve the following problems. You may use the tools you used in class including the *Student Guide* Reference section.

1. Professor Peabody is planting a garden. He buys packets of seeds. There are 38 seeds in each packet. How many seeds are in 4 packets? Show or tell how you know.
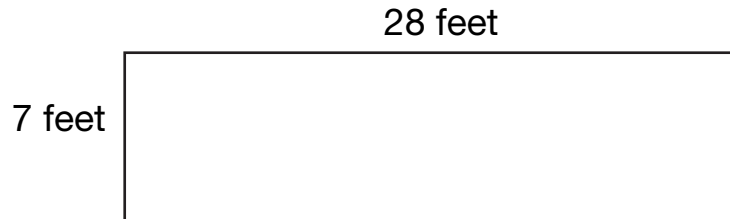
2. **A.** Each packet of seeds costs 92 cents. Show how you estimate the cost of 4 packets.

   B. Find the exact amount. Show your work.

   C. How do you know your answer is reasonable?

   D. Professor Peabody pays with a $5 bill. How much change will he receive?

3. A. The garden is shaped like a rectangle. It is 7 feet wide and 28 feet long. Show how to find the area of the garden.

28 feet

7 feet

B. The professor wants to put a fence around the garden. Show how to find the perimeter of the garden.

4. A. Professor Peabody gets thirsty when he works in the garden. He has a 32-ounce jug of water.

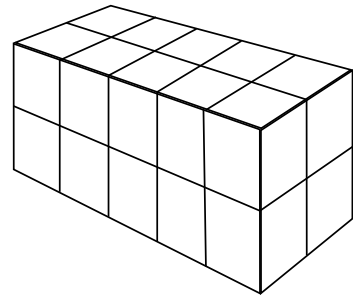How many 6-ounce cups of water can he fill? ——————— How much is left over?

B. Check for reasonableness by solving the problem another way.
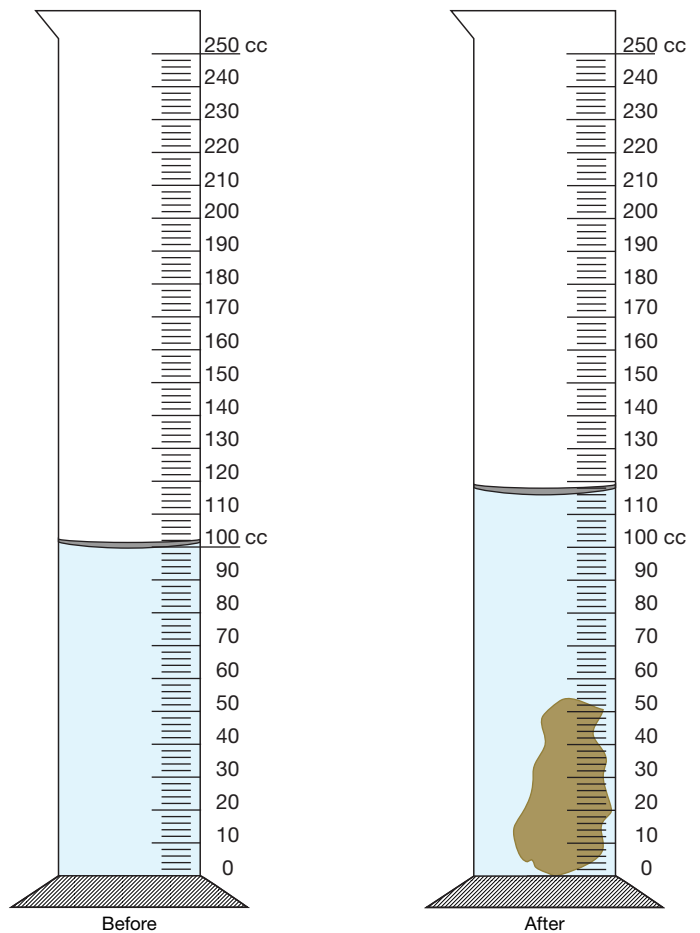
Part 2

Solve the following problems. You may use the tools you used in class such as a ruler, fraction circle pieces, individual clocks, centimeter connecting cubes, and the *Student Guide* Reference section.

5. A. Darius built a model of a rock with centimeter connecting cubes so he could estimate the rock's volume.
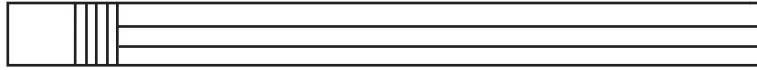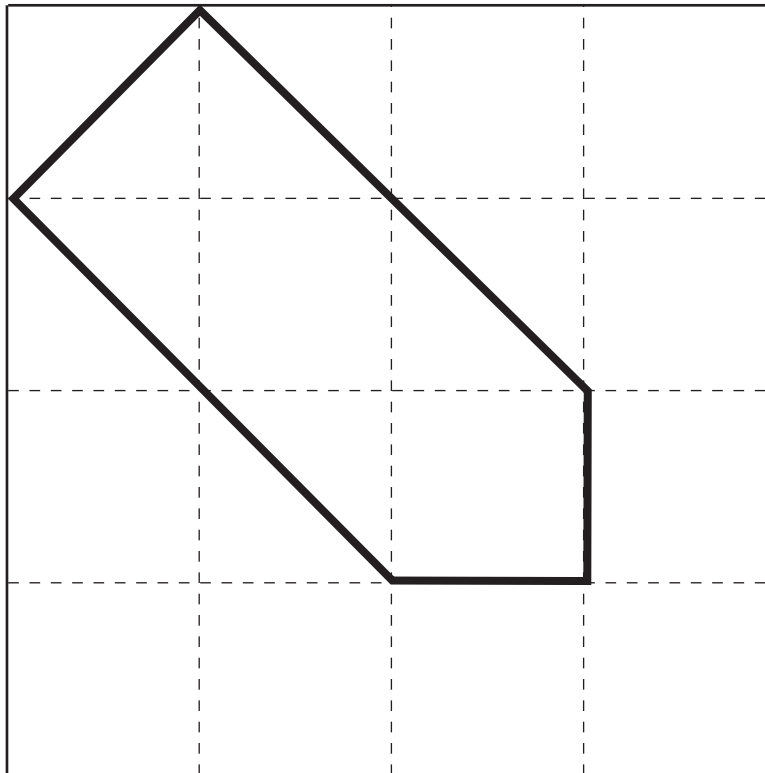
What is the volume of the cube model? _____

B. Darius used a graduated cylinder and the displacement method to find the rock's actual volume. He started by filling the cylinder with 100 cc of water. Then he slid the rock into the cylinder. Use the pictures to find the volume of the rock.

| 250 cc |
| 240 |
| 230 |
| 220 |
| 210 |
| 200 |
| 190 |
| 180 |
| 170 |
| 160 |
| 150 |
| 140 |
| 130 |
| 120 |
| 110 |
| 100 cc |
| 90 |
| 80 |
| 70 |
| 60 |
| 50 |
| 40 |
| 30 |
| 20 |
| 10 |
| 0 |

Before

After

6. Use a ruler to measure the length of the pencil to the nearest centimeter. Include units. ————————————

7. The shape below is drawn on a square-inch grid. Measure lengths to the nearest half inch.

A. What is its area? ————————————
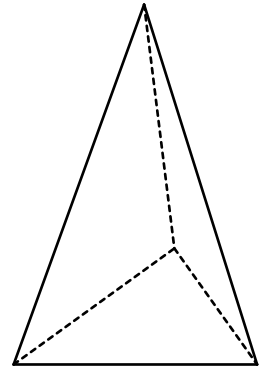
B. What is its perimeter? ————————————

C. How many sides does the shape have? ————————————

D. How many vertices does it have? ————————————

E. How many right angles does it have? ————————————
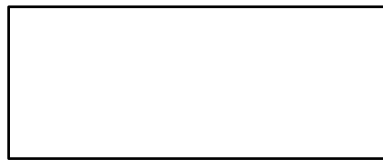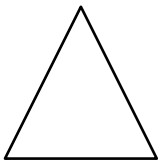
8. Look at this shape:

    A. How many vertices does it have? _____
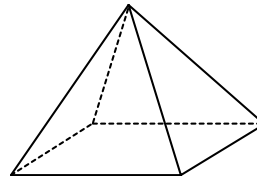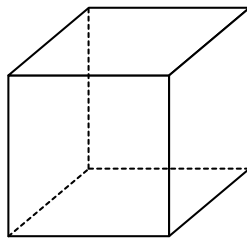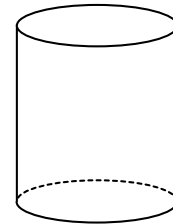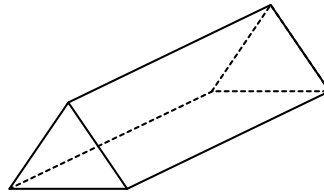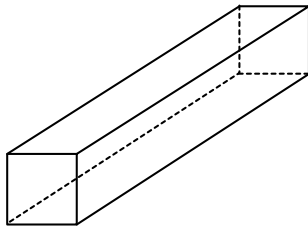
    B. How many faces does it have? _____

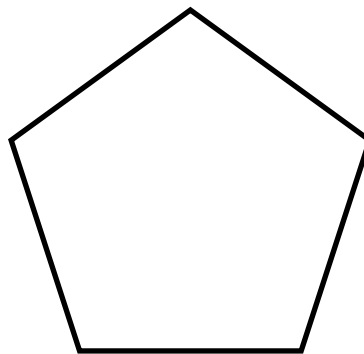   **C.** How many edges does it have? _____

9. Josh traced the faces of a three-dimentional shape.

Which 3-D shape does Josh have? Circle the shape.

10. Draw two or more lines of symmetry.

11. A. At 8:18 AM, Josh started walking his dog, Buddy. He finished at 8:44 AM. How long was the walk?

  B. Later in the day, Buddy took a nap. He fell asleep at 11:55 AM and slept for 45 minutes. What time did Buddy wake up? Was it AM or PM?

12. A. Write the coordinates of the triangle and square on the data table.

  B. Draw the circle at the correct point on the map.

Object	Right	Front
■	9	8
▲	4	2
●	6	5
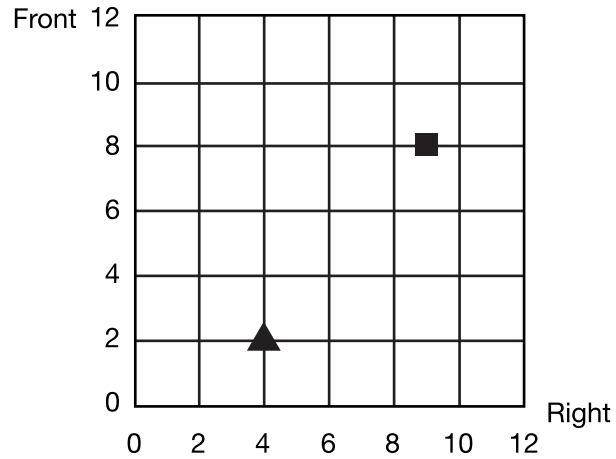
13. Mara put some marbles in one pan of a two-pan balance. She balanced the pans with three 10-gram masses, seven 5-gram masses, and two 1-gram masses. What is the marbles' mass? Show or tell how you found your answer.

For Questions 14–15 you will use the following symbols:

< less than   = equal to   > greater than

14. Write T next to the true number sentences and F next to the false number sentences.

A. $(3 \times 10g)$ + $(2 \times 5g)$ = $(8 \times 5g)$ ————

B. $(3 \times 5g)$ > $(4 \times 10g)$ ————

C. $(2 \times 20g)$ < $(7 \times 5g)$ + $(2 \times 10g)$ ————

15. A. Compare these fractions to $\frac{1}{2}$ and sort them on the table.

$\frac{2}{3}$ $\frac{2}{4}$ $\frac{1}{8}$ $\frac{3}{4}$ $\frac{5}{6}$ $\frac{4}{8}$ $\frac{6}{8}$ $\frac{1}{4}$

Fractions < $\frac{1}{2}$	**Fractions = $\frac{1}{2}$**	**Fractions > $\frac{1}{2}$**

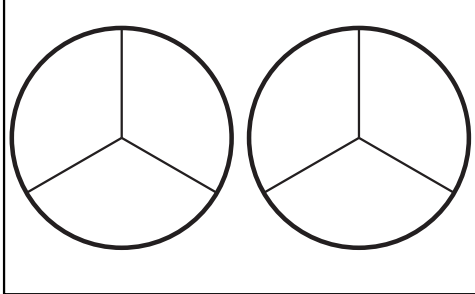**B.** How did you know where to place $\frac{2}{3}$?

16. Show the fraction on the number line in four more ways.

number
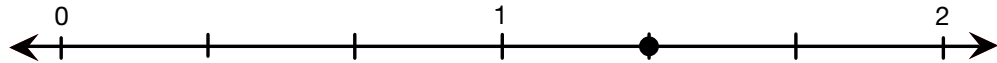
words

drawing

one whole fraction strip   one whole fraction strip

0   1   2

17. If this ☐☐ is $\frac{1}{3}$, then draw one whole.

18. Joe and Moe Smart are making punch. The recipe calls for $\frac{1}{4}$ cup sugar and $\frac{1}{4}$ gallon lime soda. Joe thinks the recipe says that they should put more lime soda into the punch bowl than sugar, but Moe disagrees. Moe says, "The recipe says that we should put the same amount of lime soda into the bowl as sugar. $\frac{1}{4}$ is the same as $\frac{1}{4}$." Who do you agree with and why?

19. **A.** Divide the rectangle into two smaller rectangles. Choose a way that will make it easy for you to find the product of 6 × 14.

   B. Write number sentences on your rectangles.

   C. Complete the number senternses.

$$6 \times 14 = \underline{\quad} \times \underline{\quad} + \underline{\quad} \times \underline{\quad}$$

$$= \underline{\quad} + \underline{\quad}$$

$$= \underline{\quad}$$

Name _____   Date _____

Part 3

20. Ms. Alfonso's class is selling donuts for the school fundraiser.

A. Complete the table.

Dozens of Donuts

Number of Dozens	Number of Donuts
1	12
2	24
4	
6	
	96

B. Make a graph using data from the table. Draw a best-fit line.
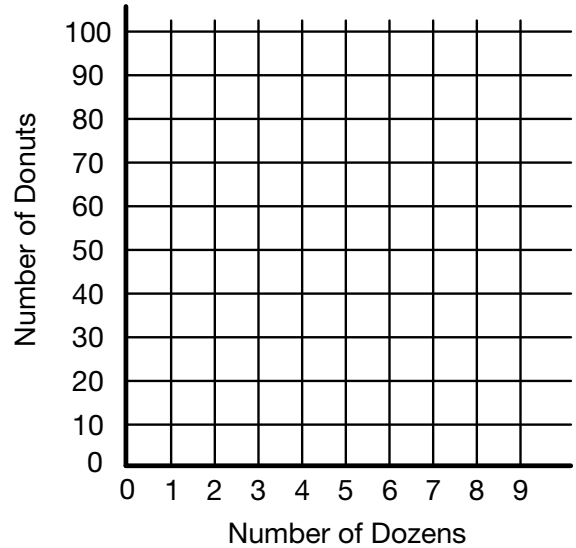
Dozens of Donuts

C. How many donuts are in 10 dozen? Show or tell how you know.

D. Mr. Martinez bought 80 donuts for the teachers. One dozen donuts fit into one box. How many boxes are needed so that he can carry them all to the teachers' lunchroom? Explain how you decided.

E. Circle the boxes of donuts in which $\frac{1}{2}$ of them are chocolate.

Name _____   Date _____

**End-of Year Test
Feedback Box**

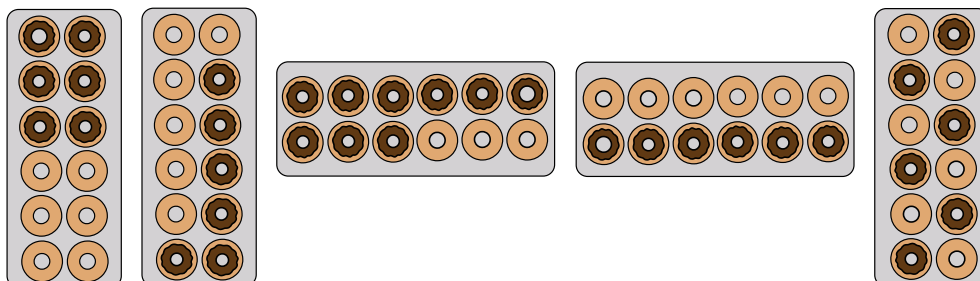|	Yes . . .	Yes, but . . .	No, but . . .	No. . .
MPE1. Know the problem. I read the problem carefully. I know the questions to answer and what information is important. [Q# 1–4]				
MPE2. Find a strategy. I choose good tools and an efficient strategy for solving the problem. [Q# 1–4]				
MPE3. Check for reasonable-ness. I look back at my solution to see if my answer makes sense. If it does not, I try again. [Q# 2C, 4B]				
MPE4. Check my calculations. If I make mistakes, I correct them. [Q# 4B]				
MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking. [Q# 1, 2A–B, 3A–B]				
MPE6. Use labels. I use labels to show what numbers mean. [Q# 1–4]				

Teacher Guide

End-of-Year Test (pp. 1–9)
Questions 1–20

Part 1

Strategies may vary.

1. 38 seeds per packet $\times$ 4 packets = 152 seeds total

2. A. Possible estimate:
$1.00 $\times$ 4 packets = $4.00

B.
$$\begin{array}{r} 92 \\ \times\ 4 \\ \hline 360 \\ +\ \ 8 \\ \hline \$3.68 \end{array}$$

C. Possible response: My answer of $3.68 was a little less than my estimate of $4.00 so I know my answer is reasonable.

D.
$$\begin{array}{r} \$5.00 \\ -\ \$3.68 \\ \hline \$1.32 \end{array}$$

3. A.

	20	8
7	$20 \times 7 = 140$	$8 \times 7 = 56$

$28 \times 7 = 140$ ft. + 56 ft. = 196 sq. ft.

B. 28 ft. + 28 ft. + 7 ft. + 7 ft. = 70 ft.

4. A. 32 ounces $\div$ 6 ounces per cup = 5 cups with 2 ounces left over

B. Possible solution:
6 oz. + 6 oz. + 6 oz. + 6 oz. + 6 oz. = 30 oz. + 2 leftover oz. = 32 oz.

Teacher Guide - Page 1

Name _____ Date _____

End-of-Year Test

Part 1

Solve the following problems. You may use the tools you used in class including the *Student Guide* Reference section.

1. Professor Peabody is planting a garden. He buys packets of seeds. There are 38 seeds in each packet. How many seeds are in 4 packets? Show or tell how you know.

2. A. Each packet of seeds costs 92 cents. Show how you estimate the cost of 4 packets.

B. Find the exact amount. Show your work.

C. How do you know your answer is reasonable?

D. Professor Peabody pays with a $5 bill. How much change will he receive?

Name _____ Date _____

3. A. The garden is shaped like a rectangle. It is 7 feet wide and 28 feet long. Show how to find the area of the garden.

28 feet
7 feet

B. The professor wants to put a fence around the garden. Show how to find the perimeter of the garden.

4. A. Professor Peabody gets thirsty when he works in the garden. He has a 32-ounce jug of water.
How many 6-ounce cups of water can he fill? _____ How much is left over?

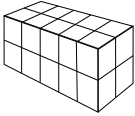**B.** Check for reasonableness by solving the problem another way.

Teacher Guide - Page 2
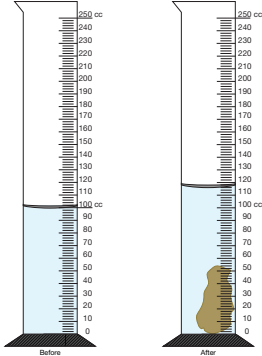
Name _____ Date _____

Part 2

Solve the following problems. You may use the tools you used in class such as a ruler, fraction circle pieces, individual clocks, centimeter connecting cubes, and the *Student Guide* Reference section.

5. A. Darius built a model of a rock with centimeter connecting cubes so he could estimate the rock's volume.

What is the volume of the cube model? _____

B. Darius used a graduated cylinder and the displacement method to find the rock's actual volume. He started by filling the cylinder with 100 cc of water. Then he slid the rock into the cylinder. Use the pictures to find the volume of the rock.

Before   After

Assessment Master   TG · Grade 3 · Unit 13 · Lesson 10   **3**

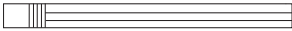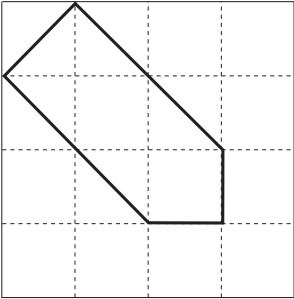*Teacher Guide* - **Page 3**

Name _____ Date _____

6. Use a ruler to measure the length of the pencil to the nearest centimeter. Include units. _____

7. The shape below is drawn on a square-inch grid. Measure lengths to the nearest half inch.
A. What is its area? _____
B. What is its perimeter? _____

C. How many sides does the shape have? _____
D. How many vertices does it have? _____
E. How many right angles does it have? _____

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Part 2

5. A. 20 cc

B. 16 cc

6. 10 cm

7. A. $4\frac{1}{2}$ sq. in.

B. $9\frac{1}{2}$ inches

C. 5 sides

D. 5 vertices

E. 3 right angles

8. A. 4 vertices

B. 4 faces

C. 6 edges

9. triangular prism
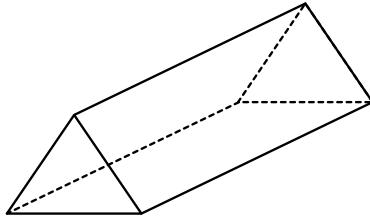
10.
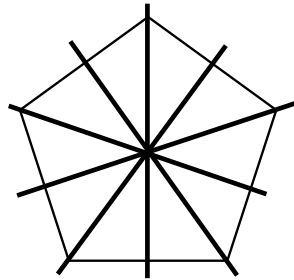
11. A. 26 minutes

B. 12:40 PM

12.

Object	Right	Front
■	9	8
▲	4	2
●	6	5
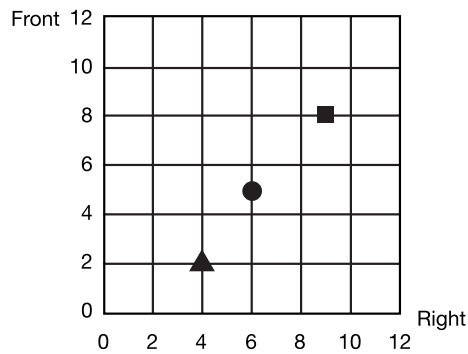
13. 67g;

$$
\begin{array}{cccc}
10 & 5 & 1 & 30 \\
10 & \times 7 & \times 2 & 35 \\
+\,10 & \overline{35} & \overline{2} & +\,2 \\
\overline{30} & & & \overline{67 \text{ grams}}
\end{array}
$$

Name _____ Date _____

8. Look at this shape:

A. How many vertices does it have? _____

B. How many faces does it have? _____

C. How many edges does it have? _____

9. Josh traced the faces of a three-dimentional shape.

Which 3-D shape does Josh have? Circle the shape.

10. Draw two or more lines of symmetry.

Assessment Master   TG · Grade 3 · Unit 13 · Lesson 10   **5**

Teacher Guide - **Page 5**

Name _____ Date _____

11. A. At 8:18 AM, Josh started walking his dog, Buddy. He finished at 8:44 AM. How long was the walk?

B. Later in the day, Buddy took a nap. He fell asleep at 11:55 AM and slept for 45 minutes. What time did Buddy wake up? Was it AM or PM?

12. A. Write the coordinates of the triangle and square on the data table.

B. Draw the circle at the correct point on the map.

Object	Right	Front
■		
▲		
●	6	5

13. Mara put some marbles in one pan of a two-pan balance. She balanced the pans with three 10-gram masses, seven 5-gram masses, and two 1-gram masses. What is the marbles' mass? Show or tell how you found your answer.

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Teacher Guide - **Page 6**

Name _____ Date _____

For Questions 14–15 you will use the following symbols:

< less than   = equal to   > greater than

14. Write T next to the true number sentences and F next to the false number sentences.

A. (3 × 10g) + (2 × 5g) = (8 × 5g) _____

B. (3 × 5g) > (4 × 10g) _____

C. (2 × 20g) < (7 × 5g) + (2 × 10g) _____

15. A. Compare these fractions to $\frac{1}{2}$ and sort them on the table.

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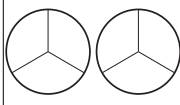
Fractions < $\frac{1}{2}$	Fractions = $\frac{1}{2}$	Fractions > $\frac{1}{2}$

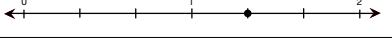**B.** How did you know where to place $\frac{2}{3}$?

16. Show the fraction on the number line in four more ways.

number

words

drawing

one whole fraction strip   one whole fraction strip

0   1   2

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Name _____ Date _____

17. If this ☐ is $\frac{1}{3}$, then draw one whole.

18. Joe and Moe Smart are making punch. The recipe calls for $\frac{1}{4}$ cup sugar and $\frac{1}{4}$ gallon lime soda. Joe thinks the recipe says that they should put more lime soda into the punch bowl than sugar, but Moe disagrees. Moe says, "The recipe says that we should put the same amount of lime soda into the bowl as sugar. $\frac{1}{4}$ is the same as $\frac{1}{4}$." Who do you agree with and why?

19. A. Divide the rectangle into two smaller rectangles. Choose a way that will make it easy for you to find the product of 6 × 14.

B. Write number sentences on your rectangles.

C. Complete the number senternses.

6 × 14 = _____ × _____ + _____ × _____

= _____ + _____

= _____

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14. A. T

B. F

C. T

15. A.

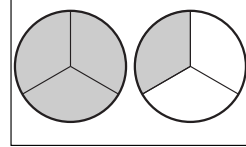| Fractions < $\frac{1}{2}$	Fractions = $\frac{1}{2}$	Fractions > $\frac{1}{2}$
$\frac{1}{8}$, $\frac{1}{4}$	$\frac{2}{4}$, $\frac{4}{8}$	$\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$, $\frac{6}{8}$

B. Possible response: I used the *Fraction Chart*. I know that $\frac{2}{3}$ is the same as $\frac{4}{6}$. $\frac{1}{2}$ is $\frac{3}{6}$ so $\frac{4}{6}$ is greater than $\frac{1}{2}$.
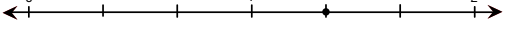
16.

$1\frac{1}{3}$

number

One and one third

words

drawing

one whole fraction strip   one whole fraction strip

0   1   2

17. Possible solution:

18. Joe is correct. $\frac{1}{4}$ of a cup is much less than $\frac{1}{4}$ of a gallon. Moe is not thinking about how big the whole is.

19. A. Possible division of rectangle and number sentences:

6 × 10 = 60   6 × 4 = 24

B. See drawing above.

C. 6 × 14 = 6 × 10 + 6 × 4

= 60 + 24

= 84

Part 3

20. **A.**

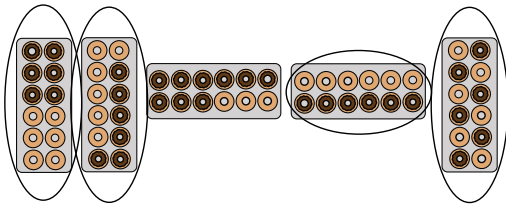| Number of Dozens	Number of Donuts
1	12
2	24
4	48
6	72
8	96

B.

Donuts Sale
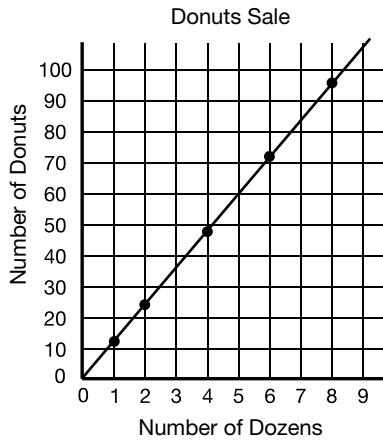
C. 120 donuts; Possible explanation: I used the graph. I found that 5 dozen is 60 donuts. I doubled that for 10 dozen.

60 donuts + 60 donuts = 120 donuts.

D. 80 donuts is between 6 dozen and 7 dozen on my graph. He would need 7 boxes to fit all of the donuts because 6 boxes would only hold 72 of the donuts.

E.

Name _____ Date _____

Part 3

20. Ms. Alfonso's class is selling donuts for the school fundraiser.

A. Complete the table.

B. Make a graph using data from the table. Draw a best-fit line.

Dozens of Donuts

Number of Dozens	Number of Donuts
1	12
2	24
4	
6	
	96

Dozens of Donuts

C. How many donuts are in 10 dozen? Show or tell how you know.

D. Mr. Martinez bought 80 donuts for the teachers. One dozen donuts fit into one box. How many boxes are needed so that he can carry them all to the teachers' lunchroom? Explain how you decided.

E. Circle the boxes of donuts in which $\frac{1}{2}$ of them are chocolate.

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