

# Grade 5 Mathematics CRT

## Part 1 (No Calculators)

1. Mr. Lopez is redoing his kitchen. The following list shows the cost of new appliances.

<u>Appliance</u>	<u>Cost</u>
Stove	\$479.29
Refrigerator	\$649.89
Dishwasher	\$329.59
Microwave	\$269.29
Toaster	\$ 39.95

- a. ABOUT how much will Mr. Lopez spend on the stove and the refrigerator together?

Estimate \_\_\_\_\_

- b. Write a number sentence that shows how you would use estimation to figure how much more expensive the dishwasher is then the microwave.

\_\_\_\_\_

- c. Mr. Lopez has budgeted \$1500 for appliances for the kitchen. Explain how he can use estimation to find out if he has enough money to buy all five appliances.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Consider the number 247,954.

- a. Write the number that is 10,000 more \_\_\_\_\_
- b. Write the number that is 1000 less \_\_\_\_\_
- c. Write the number that is 1000 more \_\_\_\_\_
- d. Write the number that is 100,000 less \_\_\_\_\_
- e. Write the number that is 10 times greater \_\_\_\_\_



3. Darlene's new stereo cost \$285. Before she bought the stereo she had about \$1000 in the bank. ABOUT how much does she have left in the bank?
- A little less than \$700
  - A little more than \$700
  - A little less than \$800
  - A little more than \$500
4. Evan can type at a rate of about 30 words per minute. About how many words can he type in an hour and a half? Explain \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

5. Use each of the digits 3, 4 and 6.
- Put one digit in each box to get the greatest possible quotient.

$$\square \overline{) \square \square}$$

- Now rearrange the digits to get the least possible quotient.

$$\square \overline{) \square \square}$$

- Explain how you decided where to place the digits in the problems above.

6. Show how you can arrange 8 of the 10 numbers below in the boxes below to get a difference close to \$10. Use each number only once.

	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
\$			.							
-			.							
\$			.							

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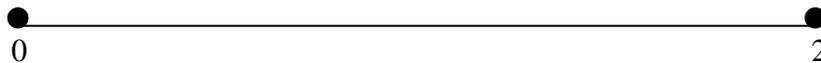
7. Place four different digits in the boxes below so that the sum of the two fractions is about one.

a.

$$\begin{array}{ccc}
 \boxed{\phantom{0}} & & \boxed{\phantom{0}} \\
 \hline
 & + & \\
 \boxed{\phantom{0}} & & \boxed{\phantom{0}} \\
 \hline
 & = & 
 \end{array}$$

Explain why you think the sum is about one.

- b. Place the following on the number line:  $\frac{2}{3}$ ,  $\frac{7}{8}$ , 0.6, 1.25,  $1\frac{3}{4}$ , 0.78, 1.09,  $1\frac{9}{10}$



8. Maria needs to estimate the difference between 3867 and 8129. Her estimate could either be 4000 or 4300.

a. When would 4000 be the most reasonable estimate?

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b. When would 4300 be the most reasonable estimate?

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9. Pasqual needs to add  $3\frac{7}{8}$  and  $7\frac{1}{9}$ . Show the whole numbers he would use to ESTIMATE this sum. Then write one or two sentences to explain why you used these numbers.

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10. Place a decimal point in the last number to make each sentence correct.

a.  $500\text{¢} = \$500$

b.  $374 \div 10 = 374$

c.  $134 \times 100 = 13400000$

d.  $135 \text{ centimeters} = 135 \text{ meters}$

e.  $1000 \text{ millimeters} = 1000 \text{ centimeters}$

**PART 2 (Calculators should be available)**

1. The school store has the following price list:

<u>Item</u>	<u>Cost</u>
Pen	\$0.85
Pen Set	\$2.29
Pencil	\$0.69
Lead Pencil	\$3.29
Crayons	\$2.75
Binder	\$1.79
Hole Punch	\$4.49
Stapler	\$3.99
Envelopes (box)	\$1.29
Pad	\$1.69

- a. What is the cost of 3 pens, 2 pencils and 5 binders? \_\_\_\_\_
- b. Mary buys one hole punch and one stapler. She pays for them with a \$20 bill. How much change should she receive?  
\_\_\_\_\_
- c. What is the average (mean) cost of the first 5 items on the list?  
\_\_\_\_\_

2. Write each of the following in standard form:

- a. 6 hundreds, 4 tens and 5 ones \_\_\_\_\_
- b. 4 thousands, 8 hundreds and 1 one \_\_\_\_\_
- c. 3 ones and 5 tenths \_\_\_\_\_
- d. 2 tens, 5 ones and 6 hundredths \_\_\_\_\_

3. Round the following numbers to the stated place:

a. Round 72 to the nearest 10 \_\_\_\_\_

b. Round 2,578 the nearest hundred \_\_\_\_\_

c. Round 4.88 to the nearest whole number \_\_\_\_\_

d. Round 3.732 to the nearest tenth \_\_\_\_\_

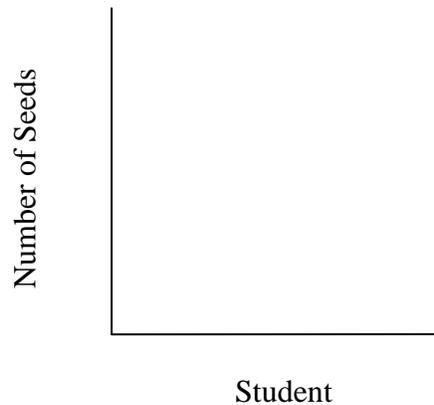
4. A school bought 16 boxes of new colored pencils. Each box contains 24 pencils. If the new pencils were divided equally among 6 classes, how many pencils will each class receive? Show all of your work.  
\_\_\_\_\_

5. Five people split the \$38.65 cost of dinner evenly. How much will each person have to pay? Show all of your work.  
\_\_\_\_\_

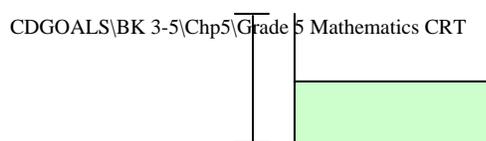
6. The 15 students in a class each count the number of pumpkin seeds in their pumpkins. The results are shown below.

<b>Student</b>	<b>Number of Seeds</b>
Thomas	381
Andy	325
Pierina	365
Olivia	410
Ginny	467
Kate	479
Mathieu	512
Geoffrey	494
Zachary	455
Elizabeth	367
Rachel	507
James	385
Elizabeth	545
Kristin	568
Lindsay	408

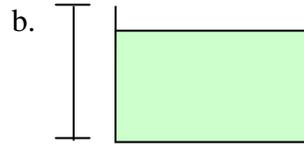
- Which student found the greatest number of seeds?
- Which student found the fewest number of seeds?
- Name three students who found about 500 seeds in their pumpkin?
- Use the first five students in the list and construct a bar graph showing how many seeds they each found in their pumpkin.



7. What fractional part of each container shown below appears to be full?



a.



Fractional part \_\_\_\_\_

Fractional part \_\_\_\_\_

8. Draw a line on each container below that shows the container filled to the fractional part shown

a.



b.



Fractional part 7/8

Fractional part 2/5

9. Draw a picture to show what  $4/3$  means.

10. Write two equivalent fractions for  $4/5$ . \_\_\_\_\_

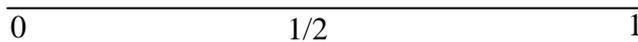
11. Consider the following fractions:

$6/11$   $5/8$   $9/20$   $3/7$   $7/15$   $11/12$   $3/10$

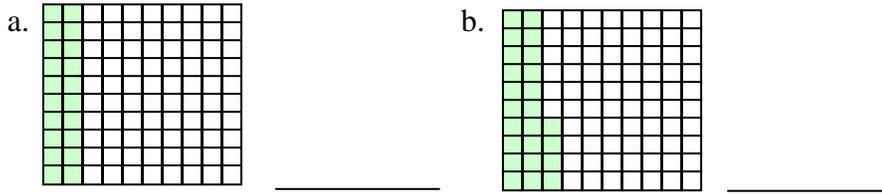
a. Circle those fractions that are less than  $1/2$

b. Underline the largest fraction

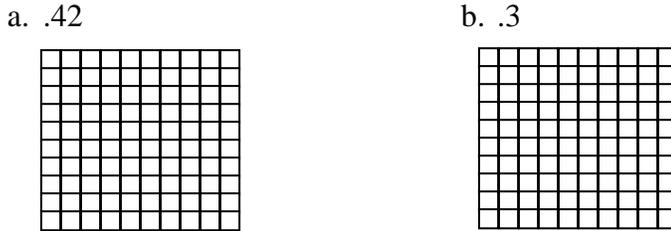
c. Put an X on the number line to show where  $3/10$  is.



12. If the large square represents one whole, what decimal is represented by the shaded part of the square?



13. Shade in the squares to show:



14. Write the next three numbers in each sequence and explain the rule for the pattern.

a. 32 28 24 \_\_\_\_\_

Rule \_\_\_\_\_

b. 1 4 7 10 \_\_\_\_\_

Rule \_\_\_\_\_

c. 1 2 4 8 16 \_\_\_\_\_

Rule \_\_\_\_\_

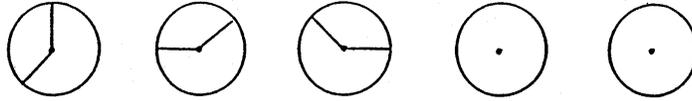
d. 1 2 4 7 11 16 \_\_\_\_\_

Rule \_\_\_\_\_

15. Draw the next figure in each of the following patterns.



b.




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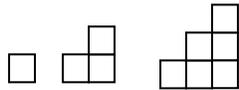
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c.



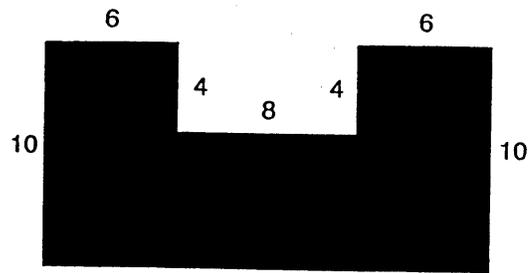

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d.




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16. Find the perimeter of this figure. Explain what you did to find the perimeter.




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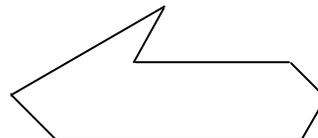
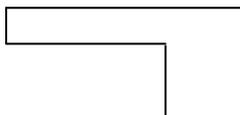


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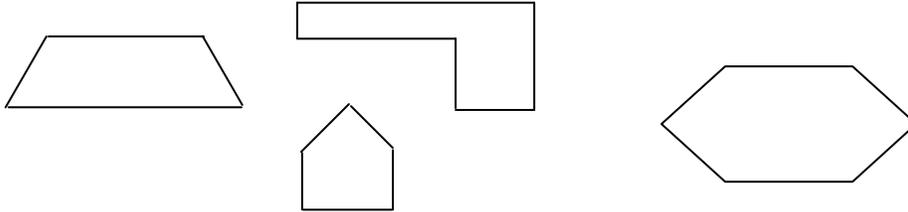
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17. Circle the shape below that is a hexagon.





18. Circle the shape below that has MORE than one line of symmetry.



19. Draw a rectangle below and identify two properties of all rectangles.

Property 1 \_\_\_\_\_

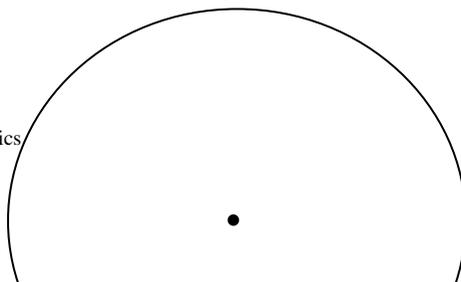
Property 2 \_\_\_\_\_

20. A square has a side 7 inches long.

a. What is the perimeter of this square? \_\_\_\_\_

b. What is the area of this square? \_\_\_\_\_

21. Draw and label a line segment that shows the diameter of the circle below. Then draw and label a second segment that shows the radius of the circle.



22. Draw a circle with a diameter of about 4 centimeters.

23. The table below shows the number of pizzas sold at Gino's last year.

<u>Type of Pizza</u>	<u>Number Sold</u>
Cheese	6428
Pepperoni	6249
Mushroom	7248
Sausage	6981
Onion	6212

- Of the types of pizza sold, which type was the LEAST popular?
- Of the types of pizza sold, which type had sales between 6500 and 7000?
- Write one additional question this graph could answer.

24. Construct a PICTOGRAPH that represents the data in the table below. Explain the key you used for your pictograph.

<u>Town</u>	<u>Population</u>
Winterston	40,000
Tunxisville	60,000
Salisbury	70,000

Town	Population

Franklin            20,000  
 Marshlock        80,000

25. Consider the data in the chart below regarding how the students in a class got to school one day.

Student	Time (minutes)	Distance (miles)	Mode of Travel
TC	60	4.7	Bus
RC	30	1.9	Bus
DD	15	1.5	Car
MR	20	0.4	Walk
LS	15	1.3	Bus
SW	8	0.9	Car
MB	45	3.9	Bus
SL	25	2.2	Bus
DH	30	4.2	Car
RT	10	1.0	Bus
GT	35	1.6	Walk

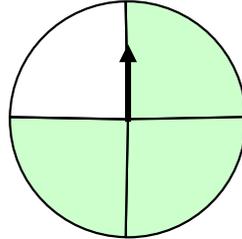
- Name the students who traveled close to 3 miles. \_\_\_\_\_
- Name the students who traveled less than 1 mile. \_\_\_\_\_
- Name the student who traveled  $1 \frac{1}{2}$  miles. \_\_\_\_\_
- How many miles did the two students who walked travel all together? \_\_\_\_\_

26. Marcie, Duane, Kari, and Michael are sitting around a table. Kari is sitting across from Marcie. Marcie is sitting at Duane's right. Draw a picture to show where each person is sitting.

27. The spinner below is spun 100 times. How many times would you predict the arrow will land on the shaded section? Explain your answer.

Prediction \_\_\_\_\_

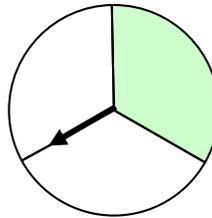
Explanation \_\_\_\_\_



28. The spinner below is spun 500 times. How many times would you predict the arrow will land on the shaded section? Explain your answer.

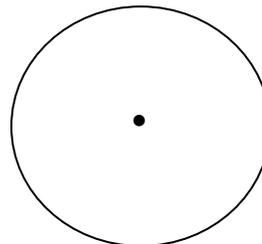
Prediction \_\_\_\_\_

Explanation \_\_\_\_\_



29. Draw a spinner that you think will give the following results if the spinner is spun 1000 times.

600 A's      300 B's      and      100 C's



30. Arrange these units of length in order from shortest to longest:

meter      centimeter      kilometer      millimeter

\_\_\_\_\_

31. Arrange these units of capacity in order for smaller to largest:

quart      pint      cup      gallon

\_\_\_\_\_

## PART 3

1. Using a ruler, draw a line segment that is  $2\frac{1}{2}$  inches long. Label the segment XY.

a. Use a centimeter ruler and draw a line that is 3 cm, 4 mm long. Label the segment AB

2. Draw two different quadrilaterals and label them with their correct names.

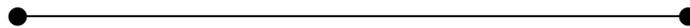
3. Bobby exercises for 20 minutes every morning except Saturday. How many hours does he spend exercising in one week? \_\_\_\_\_

4. The movie started at 7:10 and ended at 9:00 p.m. How long was the movie? \_\_\_\_\_

5. Draw a line of symmetry for this shape:



6. Measure this line segment to the closest centimeter:



7. Allie, Joy, Hope, and Darcy collect stickers. Joy has more than Hope and Allie. Darcy has the fewest stickers. Who has the most stickers? \_\_\_\_\_
8. Brett wants to buy 2 hamburgers at \$1.75 each, fries for \$1.45, and a soda for \$1.87. Show the “mental math” that Brett will do in his head to decide if the \$8.00 he has is enough to buy what he wants.
9. Megan left for a soccer game at 4:15 and got home at 6:10. How long was she gone?  
\_\_\_\_\_
10. Look at the table below to determine how many students could run the mile in less than 15 minutes.  
\_\_\_\_\_

Name	Minutes for Mile Run
Sam	13
Billy	12.5
Kelly	14
Jolene	15.2

11. A new Jeep Cherokee cost \$31,540 and a new PT Cruiser cost \$25,400. Choose the equation below that will find how much more the Jeep is than the Cruiser. \_\_\_\_\_
- a.  $31,540 + 25,400$
- b.  $31,500 - 55,400$
- c.  $31,500 \times 25,400$
- d.  $31,500 / 25,400$
12. Write a story problem for  $36 / 12 = 3$

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13. Shade in  $\frac{2}{3}$  of the circles.



14. Choose the correct equation for this array:

\_\_\_\_\_

X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

- a.  $5 \times 3$
- b.  $3 \times 6$
- c.  $5 \times 6$
- d.  $6 \times 4$

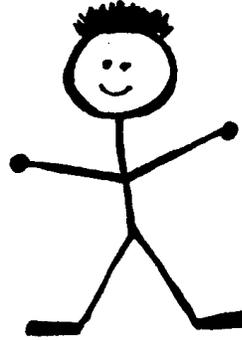
15. Circle the LARGEST amount:

- a. 9 quarters or \$1.75
- b. 3 hours 15 minutes or 200 minutes
- c. 240 cm or 30 m

16. Ned has 25 Jolly Ranchers that he will share equally among himself and 4 friends. Which expression below is the correct one to use to find this answer? \_\_\_\_\_

- a.  $25 \times 4$
- b.  $25 \div 4$
- c.  $25 \times 5$
- d.  $25 \div 5$

17. The large stick figure is ABOUT HOW MANY TIMES TALLER than the small figure?

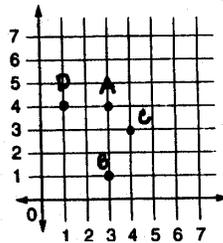


18. Use a PROTRACTOR to draw a 75 degree angle.

19. To ESTIMATE the product of 412 and 625, Jason multiplied  $400 \times 600$ . Will Jason's estimate be MORE or LESS than the actual sum? \_\_\_\_\_

- a. More because he rounded both numbers up.
- b. More because he rounded both numbers down.
- c. Less because he rounded both numbers up.
- d. Less because he rounded both numbers down.

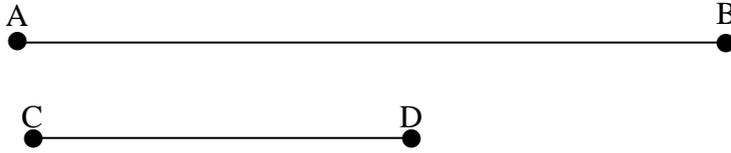
20. Look at the grid below. Which letter is located at 4, 3? \_\_\_\_\_



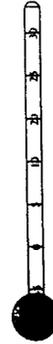
21. The amount of water in an eyedropper is best measured using: \_\_\_\_\_

- a. milliliters
- b. liters
- c. kiloliters

22. Line segment AB is about \_\_\_\_\_ times as large as line segment CD



23. 23 degrees Celsius is great weather for swimming. Mark this temperature on the thermometer with a heavy line.



24. Fill in the missing numbers on this grid:

X	30	
	120	
7		350

25. Draw an octagon. How many obtuse angles does an octagon have? \_\_\_\_\_

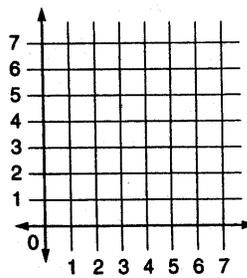
26. Draw an array for  $16 \div 2$

27. Maleana bought three shirts for \$14.95 each. What would be her change from \$100?

\_\_\_\_\_

28. On the grid below, find each coordinate below and label A, B, or C.

- a. (2,1)
- b. (2,4)
- c. (3,7)



29. Solve the riddle: \_\_\_\_\_

I am a 2-digit prime number  
 I am greater than 14 and less than 36  
 The sum of my digits is 10  
 Who am I?

30. Jared has to give each horse 32 ounces of grain each day. There are 12 horses. How much grain will he need to be able to feed the horses for 1 week? Show your work.

\_\_\_\_\_

31. Mrs. Naumac ordered 240 hamburgers for the school. What else do you need to know to find out how many hamburgers each student gets?

32. Savva got to his friend's house at 3:25. He left at 5:15. How long was he at his friend's?

\_\_\_\_\_

33. Circle the larger fraction in each pair.

- a.  $\frac{1}{4}$
- b.  $\frac{1}{2}$
- c.  $\frac{2}{3}$
- d.  $\frac{2}{6}$

34. Aaron needs 24 plates for his party. They are sold in packages of 8. How many packages of plates does he need to buy? \_\_\_\_\_

35. Crystal is going to put wall paper trim around her room. Her room is 10 ft. long and 12 ft. wide. If the trim cost \$2.00 for each foot, how much will it cost her in all? \_\_\_\_\_

36. Jessica got home at 3:45. She asked her mom, "What time is supper?" Her mom said, "It will be in 1 hour and 45 minutes." What time is supper? \_\_\_\_\_

37. Circle the bigger decimal and explain your choice.      0.3      0.03

38. Aaron worked on his homework for 35 minutes. He finished at 5:00. What time did he start on his homework? \_\_\_\_\_

39. If the 6 in 1,268 is changed to a 7 how will that change the value?

- a. 1 more
- b. 10 more
- c. 100 more
- d. 1000 more

40. If the 6 in 4.621 is changed to a 5, how will that change the value? \_\_\_\_\_