EM4 Grade 6 End-of-Year Assess. (Version 3- English)

Student Name: _____

Student ID:_____

Date: _____

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1   Identify the best estimate for each problem.

a. 6,000 $\div$ 24

    25   250   2,500

___

b. 2.6 $*$ 4.9

    8   15   24

___

c. $5 \div \dfrac{1}{2}$

    5   8   10

___

d. 25% of 80

    12   20   25

___

_____   _____   _____   _____

2   Calculate.

a. 8.7 $*$ 4.1 = __

b. 24.85 $\div$ 0.5 = __

c. 1,170 $\div$ 26 = __

d. $1\frac{1}{4}$ $\div$ $2\frac{7}{8}$ = __

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3   **a.** What number is 35% of 40? __

b. 45 is 150% of what number? __

c. 15 is what percent of 75? __

4   Write *greater than, less than,* or *equal to* to make each sentence true.

a. 6.04 is __ 6.38

b. $\dfrac{7}{10}$ is __ 3/4

c. 0.8 is __ $\dfrac{8}{10}$

d. 75% is __ $\dfrac{9}{12}$

e. 5.6 is __ $5\dfrac{2}{5}$

f. -5 is __ $\left|-5\right|$

g. 23 is __ 32

h. -2 is __ -13

i. GCF (56, 63) is __ GCF (21, 35)

j. $-\dfrac{8}{3}$ is __ $-2\dfrac{2}{3}$

5   Sea level is at 0. The table lists the lowest point in each continent.

Continent	Lowest Point (feet)
Asia	−1,348
Africa	−512
North America	−131
Australia	−52

Tell whether the statements below are true or false.

a. The elevation at the lowest point in Asia is lower than the elevation at the lowest point in Africa.

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b. The elevation at the lowest point in Africa is closer 0 than the elevation at the lowest point in North America.

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6   Use paper and pencil to solve the problem.
Tayah drove 258 miles in 6 hours at a constant speed.

a. How fast was she driving?

b. If she drives another 172 miles at the same speed, how long will it take her?
Show how a rate table and unit rates can help you solve the problem.

Solution:

c. Tayah's car used 8.6 gallons of gasoline to travel 258 miles.
On average, about how many miles per gallon did the car travel?

7   The table shows nut sales at In A Nutshell on Wednesday.

Type of Nut	Amount Sold
Almonds	14 pounds
Pistachios	21 pounds
Peanuts	20 pounds
Walnuts	16 pounds

a. Fill in the blank with the numbers that best complete the sentence.

For every __ [3, 4, 5] pounds of peanuts sold, __ [3, 4, 5] pounds of walnuts were sold.

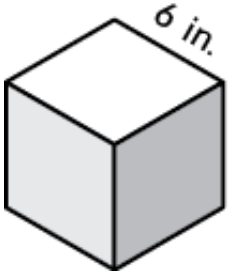**b.** Use ratio notation to write a ratio representing the situation.

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9　Use paper and pencil to solve the problem.

a. Find the volume of the cube.

Number model:

Volume:

b. Draw a net to represent the cube.

c. Use your net to find the surface area of the cube.

Number model:

Surface area:

10   Vishal solved the problem $2 * 4 + 4^2$ and got 40.

   a. Explain how Vishal might have solved the problem.

   b. Explain how to solve the problem using the correct order of operations.

12   Write *true, false,* or *not enough information* next to each statement.

The Barrett Middle School basketball team played 11 games.
The mode of the number of points they scored in a game is 27.
The range for the number of points they scored in a game is 19.

a. If the most points scored in a game is 42, then the lowest number of points scored in a game is 32.

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b. The team scored 27 points in a game at least two times.

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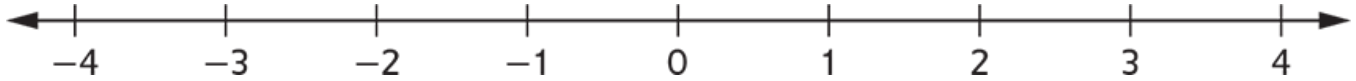**c.** The mean of the points scored in a game is 27.

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d. The median for the number of points scored in a game could be 30.
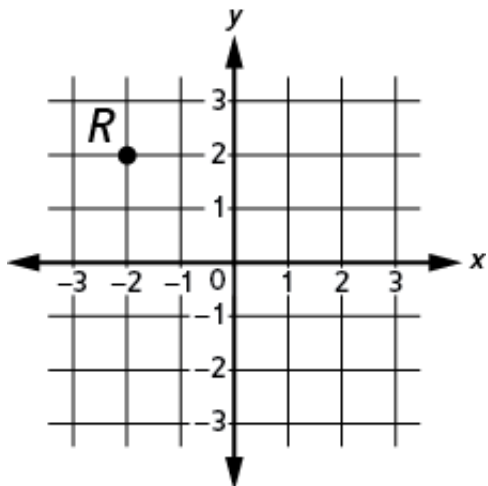
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14 Use paper and pencil to solve the problem.

Label the following points on the number line.

$A: -\dfrac{3}{2}$　　$B: -\dfrac{1}{9}$　　$C: -\dfrac{1}{3}$　　$D: \dfrac{10}{3}$　　$E: 1\dfrac{1}{2}$

15 Use paper and pencil to solve the problem.

a. Find the x- and y-coordinates for point R. (

16   Harlan has $6\frac{1}{2}$ cups of fruit salad. He is packing the salad in $\frac{3}{4}$ -cup containers to take to a picnic. How many containers does he need?

Number model:

Solution:

17   Esteban and Terrence are running on a mile-long circular path through a forest preserve.
It takes Esteban 6 minutes and Terrence 9 minutes to run the full circle.
If they start together at 8:00 a.m. and keep running, when will they both be at the beginning of the course again?

___

18   Select all of the expressions below that represent the product of m and 5.

m^5 $5 - m$ $m / 5$ $m(5)$ $5m$

19   Select all of the expressions below that are equivalent to $6(c + 2)$.

$3c + 6 + 3c + 6$ $6 + c^2$ $4c + 2c + (4 * 3)$ $5(c + 2) - (c + 2)$ $(6 * c) + (6 * 2)$
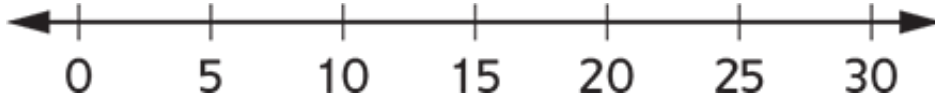
21   Use paper and pencil to solve the problem.

It takes Paula less than 22 minutes to walk to work. Define a variable and write an inequality that represents how long it takes Paula to walk to work.

a. Define a variable.

Inequality:

b. Graph the solution set for your inequality.

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22 Use substitution to determine which values for w are in the solution set for the equation $7w + w^2 + 3w = 75$.

$w = 3$ $w = 4$ $w = 5$ $w = 6$

25   Use paper and pencil to solve the problem.

Solve the equation using any method you choose, and check your answer.

$6e + 8 = 38$

$e =$

Check: