

Eastmont Math Challenge

Week of 4/13- 4/17

This handout is for all Eastmont Intermediate students. Each week a handout similar to this one will be available to students. As you work through the problems, work independently but feel free to use online resources if you need help (khan academy or google). This handout is one component of your math activities. The other component is Freckle math. You are encouraged to progress through the Freckle activities as well. Check your google classroom daily for possible updates from your teachers. **Answer keys for handouts will be available the following week.*

Clay Pottery

Lizzie and Zela are interested in making pottery. The following chart shows how much clay is needed to make different projects.

Project	Pounds of Clay Needed
 Small Plate	$2\frac{1}{2}$
 Small Bowl	$1\frac{1}{2}$
 Large Bowl	$3\frac{1}{4}$
 Dinner Plate	$4\frac{1}{2}$
 Mug	$\frac{3}{4}$

1. Which project needs the most clay?

- A. Small Plate
- B. Small Bowl
- C. Large Bowl
- D. Dinner Plate
- E. Mug

2. How much more clay, in pounds, is needed to make a large bowl than a small bowl?

_____pounds

3. Zela wants to make a set of 6 mugs. The clay **only** comes in 1-pound blocks. What is the **least** number of blocks of clay Zela will need to make 6 mugs? Explain how you figured out your answer.

Note: Zela knows that leftover clay from each block can be squished together and used.



_____ blocks

4. Lizzie has 12 pounds of clay and wants to use all of it. She does not need to make all of the projects, and may make more than one of any project.

Describe a plan for Lizzie to use 12 pounds of clay making projects from the chart.

Show how you know she will use **exactly** 12 pounds of clay with this plan

Why Did the Writer Enjoy Living in a Basement?

Do each exercise and find your answer to the right. Write the letter of the answer in the box containing the number of the exercise. If the answer has a ●, shade in the box instead of writing a letter in it.

I. Write each ratio as a fraction in simplest form.

- (1) 7 to 12 (2) 9:4
 (3) 8 to 10 (4) 20 to 12
 (5) 25:50 (6) 6 out of 15
 (7) 80 to 60 (8) 35 out of 100
 (9) 78 out of 780 (10) 90:30
 (11) The ratio of wins to tosses for a team with 60 wins and 90 losses.
 (12) The ratio of girls to boys in a 7th grade class with 300 girls and 250 boys.
 (13) The ratio of red to blue for a purple paint made by mixing 24 oz of red with 28 oz of blue.
 (14) The ratio of blue to red for a purple paint made by mixing 24 oz of red with 28 oz of blue.

Answers:

- (H) $\frac{8}{5}$ (T) $\frac{4}{5}$
 (A) $\frac{1}{10}$ ● $\frac{4}{3}$
 ● $\frac{6}{5}$ (D) $\frac{3}{10}$
 (A) $\frac{7}{12}$ (S) $\frac{1}{2}$
of *of.*
 (A) $\frac{7}{6}$ (E) $\frac{9}{4}$
 ● $\frac{5}{3}$ (I) $\frac{6}{7}$
 (E) $\frac{2}{3}$ (R) $\frac{2}{5}$

II. Write the ratio of the two measurements in the unit indicated (a *unit* rate).

- (15) A car traveled 300 miles on 15 gallons of gas. (miles per gallon)
 (16) Ima Smurf typed 120 words in 3 minutes. (words per minute)
 (17) Dr. Cranium traveled 2,800 miles in 5 hours: (miles per hour)
 (18) A gear revolved 960 times in 30 minutes. (revolutions per minute)
 (19) Gloria Trench earned \$144 in 8 hours. (dollars per hour)
 (20) Roger Bannister ran 5,280 feet in 4 minutes. (feet per second) (HINT 4 min = ? s)

Answers:

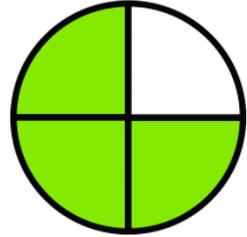
- (M) 48 (B) 560
 (C) 32 (L) 22
 (T) 15 ● 20
 (W) 40 (N) 520
 (S) 18 (E) 36

13	3	7	16	9	5	15	1	4	17	11	19	8	12	18	2	20	10	14	6
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*****HELPFUL HINTS*****

1. Look at the pictures and the whole number part of the fraction to help you decide which one needs the most clay.
2. Try drawing a picture of the fractions. How many more fourths are there in the large bowl than the small bowl? Or use subtraction!

3. Draw out each pound and cut them into fourths, you need 3 pieces (or 3 fourths) for each mug. Count up enough for 6 mugs! How many pounds did you need to draw?



4. Try adding different combinations until you get exactly 12 pounds of clay!

Why Did the Writer Enjoy Living in a Basement?

- I. Write each ratio as a fraction in simplest form

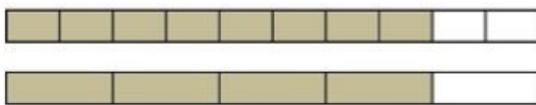
Ratio: comparing two things

$3:2$ ratio	$\frac{3}{2}$ fraction
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Simplest form: reduce the fraction, what number can divide evenly into both?

Reduce the following fraction to its simplest form.

$$\frac{8}{10} = \frac{4}{5}$$



Greatest Common Factor

$$\frac{8}{12} \div 4 = \frac{2}{3}$$

- II. Write the ratio of the two measurements in the unit indicated

Ratios and Fractions are division! Write the ratio then divide: top divided by bottom!

example: $\frac{10}{5}$ is the same as $10 \div 5 = 2$

1 minutes = 60 secondsso how many seconds would be in 4 minutes?