

Focus & Within Grade Coherence

Task Handout, Grade 5

Major Task #1

- a. Kipton has a digital scale. He puts a marshmallow on the scale and it reads 7.2 grams. How much would you expect 10 marshmallows to weigh? Why?
- b. Kipton takes the marshmallows off the scale. He then puts on 10 jellybeans and the scale reads 12.0 grams. How much would you expect 1 jellybean to weigh? Why?
- c. Kipton then takes off the jellybeans and puts on 10 brand-new pink erasers. The scale reads 312.4 grams. How much would you expect 1,000 pink erasers to weigh? Why?

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Major Task #2

A box 2 centimeters high, 3 centimeters wide, and 5 centimeters long can hold 40 grams of clay. A second box has twice the height, three times the width, and the same length as the first box. How many grams of clay can it hold?

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Supporting Task #1

1. Convert and write an equation with an exponent. Use your meter strip when it helps you.

a. 3 meters to centimeters $3 \text{ m} = 300 \text{ cm}$ $3 \times 10^2 = 300$

b. 105 centimeters to meters $105 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$ _____

c. 1.68 meters to centimeters $\underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ cm}$ _____

d. 80 centimeters to meters $\underline{\hspace{2cm}} \text{ cm} = \underline{\hspace{2cm}} \text{ m}$ _____

e. 9.2 meters to centimeters $\underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ cm}$ _____

f. 4 centimeters to meters $\underline{\hspace{2cm}} \text{ cm} = \underline{\hspace{2cm}} \text{ m}$ _____

g. In the space below, list the letters of the problems where larger units are converted to smaller units.

2. Convert using an equation with an exponent. Use your meter strip when it helps you.

a. 3 meters to millimeters $\underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ mm}$ _____

b. 1.2 meters to millimeters $\underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ mm}$ _____

c. 1,020 millimeters to meters $\underline{\hspace{2cm}} \text{ mm} = \underline{\hspace{2cm}} \text{ m}$ _____

d. 97 millimeters to meters $\underline{\hspace{2cm}} \text{ mm} = \underline{\hspace{2cm}} \text{ m}$ _____

e. 7.28 meters to millimeters $\underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ mm}$ _____

f. 4 millimeters to meters $\underline{\hspace{2cm}} \text{ mm} = \underline{\hspace{2cm}} \text{ m}$ _____

g. In the space below, list the letters of the problems where smaller units are converted to larger units.

Source: EngageNY.org of the New York State Education Department. Grade 5 Mathematics, Module 1, Lesson 4. Available from <https://www.engageny.org/resource/grade-5-mathematics-module-1-topic-lesson-4/file/39361> accessed 10 June 2016.

Within Grade Coherence Task #1

Some of the problems below can be solved by multiplying $\frac{1}{8} \times \frac{2}{5}$, while others need a different operation. Select the ones that can be solved by multiplying these two numbers. For the remaining, tell what operation is appropriate. In all cases, solve the problem (if possible) and include appropriate units in the answer.

- a. Two-fifths of the students in Anya's fifth grade class are girls. One-eighth of the girls wear glasses. What fraction of Anya's class consists of girls who wear glasses?
- b. A farm is in the shape of a rectangle $\frac{1}{8}$ of a mile long and $\frac{2}{5}$ of a mile wide. What is the area of the farm?
- c. There is $\frac{2}{5}$ of a pizza left. If Jamie eats another $\frac{1}{8}$ of the original whole pizza, what fraction of the original pizza is left over?
- d. In Sam's fifth grade class, $\frac{1}{8}$ of the students are boys. Of those boys, $\frac{2}{5}$ have red hair. What fraction of the class is red-haired boys?
- e. Only $\frac{1}{20}$ of the guests at the party wore both red and green. If $\frac{1}{8}$ of the guests wore red, what fraction of the guests who wore red also wore green?
- f. Alex was planting a garden. He planted $\frac{2}{5}$ of the garden with potatoes and $\frac{1}{8}$ of the garden with lettuce. What fraction of the garden is planted with potatoes or lettuce?
- g. At the start of the trip, the gas tank on the car was $\frac{2}{5}$ full. If the trip used $\frac{1}{8}$ of the remaining gas, what fraction of a tank of gas is left at the end of the trip?
- h. On Monday, $\frac{1}{8}$ of the students in Mr. Brown's class were absent from school. The nurse told Mr. Brown that $\frac{2}{5}$ of those students who were absent had the flu. What fraction of the absent students had the flu?
- i. Of the children at Molly's daycare, $\frac{1}{8}$ are boys and $\frac{2}{5}$ of the boys are under 1 year old. How many boys at the daycare are under one year old?
- j. The track at school is $\frac{2}{5}$ of a mile long. If Jason has run $\frac{1}{8}$ of the way around the track, what fraction of a mile has he run?

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Within Grade Coherence Task #2

What time was it 2011 minutes after the beginning of January 1, 2011?

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