Week 4 ----Grade 5 going to Grade 6

Summer Packet
Grade 5 going to Grade 6
(Week 4)
2018/2019

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Name _____ Date _____

1. A rectangular container that has a length of 30 cm, a width of 20 cm, and a height of 24 cm is filled with water to a depth of 15 cm. When an additional 6.5 liters of water are poured into the container, some water overflows. How many liters of water overflow the container? Use words, pictures, and numbers to explain your answer. (Remember: 1 cm^3 = 1 mL.)

2. Jim says that a $2\frac{1}{2}$ inch by $3\frac{1}{4}$ inch rectangle has a section that is 2 inches × 3 inches and a section that is $\frac{1}{2}$ inch × $\frac{1}{4}$ inches. That means the total area is just the sum of these two smaller areas, or $6\frac{1}{8}$ in^2. Why is Jim incorrect? Use an area model to explain your thinking. Then, give the correct area of the rectangle.

3. Miguel and Jacqui built towers out of craft sticks. Miguel's tower had a 4-inch square base. Jacqui's tower had a 6-inch square base. If Miguel's tower had a volume of 128 cubic inches and Jacqui's had a volume of 288 cubic inches, whose tower was taller? Explain your reasoning.

Week 4 ----Grade 5 going to Grade 6

4. Read the statements. Circle True or False. Explain your choice for each using words and/or pictures.

   a. All parallelograms are quadrilaterals. True False

   b. All squares are rhombuses. True False

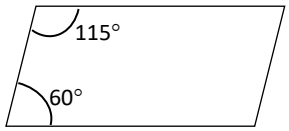
   c. Squares are rhombuses, but not rectangles. True False

   d. The opposite angles in a parallelogram have the same measure. True False

   e. Because the angles in a rectangle are 90°, it is not a parallelogram. True False

   f. The sum of the angle measures of any trapezoid is greater than the sum of the angle measures of any parallelogram. True False

   g. The following figure is a parallelogram. True False



Week 4 ----Grade 5 going to Grade 6

5. Compare using >, <, or =.

a. 0.4 ◯ 0.127

b. 2 thousandths + 4 hundredths ◯ 0.036

c. 2 tens 3 tenths 1 thousandth ◯ 20.31

d. 24 tenths ◯ 2.5

e. $4 \times 10^3 + 2 \times 100 + 3 \times \frac{1}{10}$ ◯ $4 \times 1000 + 2 \times 10^2 + 3 \times \frac{1}{10}$

f. $3 \times \frac{1}{10} + 4 \times \frac{1}{1000}$ ◯ 0.340

6. Model the number 8.88 on the place value chart.

a. Use words, numbers, and your model to explain why each of the digits has a different value. Be sure to use “ten times as large” and “one tenth as large” in your explanation.

Week 4 ----Grade 5 going to Grade 6

b. Multiply 8.88×10^4. Explain the shift of the digits and the change in the value of each digit.

c. Divide the product from (b) by 10^2. Explain the shift of the digits and the change in the value of each digit.

7. Rainfall collected in a rain gauge was found to be 2.3 cm when rounded to the nearest tenth of a centimeter.

a. Circle all the measurements below that could be the actual measurement of the rainfall.

2.251 cm 2.349 cm 2.352 cm 2.295 cm

b. Convert the rounded measurement to meters. Write an equation to show your work.

Week 4 ----Grade 5 going to Grade 6

8. Average annual rainfall totals for cities in New York are listed below.

Rochester	0.97 meters
Ithaca	0.947 meters
Saratoga Springs	1.5 meters
New York City	1.268 meters

a. Put the rainfall measurements in order from least to greatest. Write the smallest total rainfall in word form and expanded form.

b. Round each of the rainfall totals to the nearest tenth.

c. Imagine New York City's rainfall is the same every year. How much rain would fall in 100 years?

d. Write an equation using an exponent that would express the 100-year total rainfall. Explain how the digits have shifted position and why.

Week 4 ----Grade 5 going to Grade 6

9. Lila collected the honey from 3 of her beehives. From the first hive she collected $\frac{2}{3}$ gallon of honey.
   The last two hives yielded $\frac{1}{4}$ gallon each.

a. How many gallons of honey did Lila collect in all? Draw a diagram to support your answer.

b. After using some of the honey she collected for baking, Lila found that she only had $\frac{3}{4}$ gallon of honey left. How much honey did she use for baking? Support your answer using a diagram, numbers, and words.

Week 4 ----Grade 5 going to Grade 6

c. With the remaining $\frac{3}{4}$ gallon of honey, Lila decided to bake some loaves of bread and several batches of cookies for her school bake sale. The bread needed $\frac{1}{6}$ gallon of honey and the cookies needed
$\frac{1}{4}$ gallon. How much honey was left over? Support your answer using a diagram, numbers, and words.

d. Lila decided to make more baked goods for the bake sale. She used $\frac{1}{8}$ lb less flour to make bread than to make cookies. She used $\frac{1}{4}$ lb more flour to make cookies than to make brownies. If she used $\frac{1}{2}$ lb of flour to make the bread, how much flour did she use to make the brownies? Explain your answer using a diagram, numbers, and words.