


Topic A Quiz Prep (Lessons 1 - 8)

Item 1: Place Value – Comparing the Value of Digits

Consider the number **456.923**. Which number below has a digit 5 with a value **1/10 as much as** the digit 5 in the number 456.92.

You should be comfortable understanding the value of each digit in a number to the thousandths place. In this question, we are asked to consider the digit 5 which is in the **tens place**. That 5 has a value of 50 (five tens). So, now we are asked to look at the numbers given and look for a digit with the value **1/10 as much as** 50. That would mean we are looking for a digit with the value of 5 because **5 is 1/10 as much as 50**.

- A. **546.923** This 5 has a value of 500, ten times MORE.
- B. **353.923** This 5 has the same value; 50.
- C. **436.593** This 5 has a value of 5/10; 1/100 as much as 50.
-  D. **465.923** This 5 has a value of 5; 1/10 as much as 50.

Item 2: Compare decimal numbers with >, <, or =

$115.123 < 115.213$ $15.10 = 15.1$
 $0.23 > 0.099$ $0.071 < 0.170$

An easy way to compare decimals is to write them underneath each other in a place value chart being sure to line up the decimal point. Then look at each place value at a time and compare them. Just because a decimal may look longer (goes to the thousandths place) doesn't make a difference in value. Compare each place value digit.

Item 3: Rounding Decimals to a Given Place.

	Rounded to the nearest TEN	Rounded to the nearest ONE	Rounded to the nearest TENTH	Rounded to the nearest HUNDREDTH
465.923	470	466	465.9	465.9
15.859	20	16	15.9	15.86

Rules of Rounding:

Identify the place you are asked to round to.

Look to the right of that #.

5 or more – round up.

4 or less – keep the number as it is.

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"10 times as much as" means 10 times more than the value.
 "1/10 as much as" means 1/10 of the value.

Answer Choices

10	$\frac{1}{10}$
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Item 4: "10 times as much" OR "1/10 times as much"

- A digit in the **hundreds** place represents $\frac{10}{1}$ times as much as that same digit in the **tens** place.
- A digit in the **hundredths** place represents $\frac{1}{10}$ times as much as that same digit in the **tenths** place.
- A digit in the **thousands** place represents $\frac{10}{1}$ times as much as that same digit in the **hundreds** place.
- A digit in the **thousandths** place represents $\frac{1}{10}$ times as much as that same digit in the **hundredths** place.

445.923

445.223

2,245.923

2,145.933

Item 5: Writing a decimal in expanded form.

You should be comfortable understanding the value of each digit in a number to the thousandths place.
 For each digit, write the value as a multiplication equation in parentheses.

0.365

Express the number in expanded form. Write one number or symbol from the given answer choices in each blank. Answers may be used more than once.

Sample:

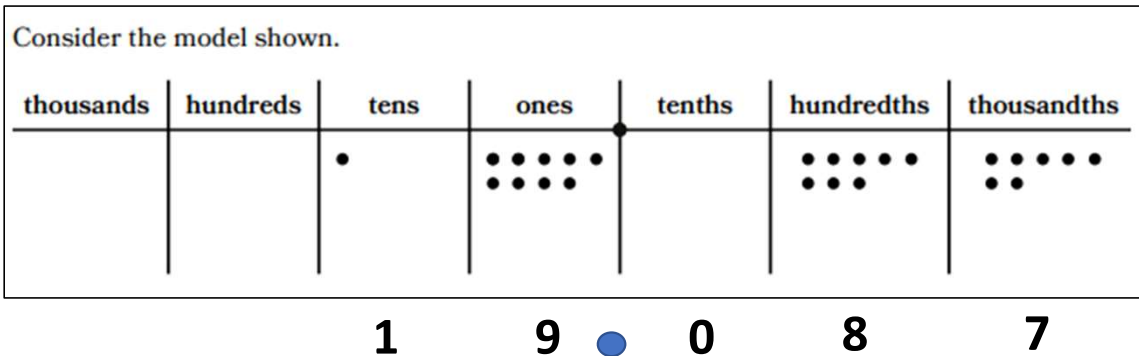
$$\left(\underline{3} \times \frac{1}{10} \right) + \left(\underline{6} \times \frac{1}{100} \right) + \left(\underline{5} \times \frac{1}{1,000} \right)$$

Answer Choices

$\frac{1}{1,000}$	$\frac{1}{100}$	$\frac{1}{10}$	1	3	5	6	10	100	1,000	+	×
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Item 6: Place Value Model to Represent a Decimal



19.087

The place value chart above shows the decimal 19.807.

What would this number become if it were multiplied by 1,000?

The number would become 1,000 times larger, and each digit would shift 3 places to the LEFT.

19.087 x 1,000

19,087.