



Penrose GED Prep

1.4 Decimals: Place Value

In this worksheet, we will recognize the value of the individual digits in a decimal number. If you would like further explanation before attempting these problems, links to video descriptions can be found at the end of this worksheet. Starred problems have video solutions.

- 1 * Given a number with decimals like 6832.915, we can write it out in its *place value expansion* as

$$6 \times 1000 + 8 \times 100 + 3 \times 10 + 2 \times 1 + 9 \times \frac{1}{10} + 1 \times \frac{1}{100} + 5 \times \frac{1}{1000}.$$

Using this expansion as a guide, determine the following.

- The hundred's place of 6832.915 ____
- The ten's place of 6832.915 ____
- The tenth's place of 6832.915 ____
- The hundredth's place of 6832.915 ____

- 2 Fill in the blanks to expand 3449.028 into its place value expansion.

$$\underline{\quad} \times 1000 + \underline{\quad} \times 100 + \underline{\quad} \times 10 + \underline{\quad} \times 1 + \underline{\quad} \times \frac{1}{10} + \underline{\quad} \times \frac{1}{100} + \underline{\quad} \times \frac{1}{1000}$$

- 3 Using the expansion from problem 2, determine the following.

- The thousand's place of 3449.028 ____
- The one's place of 3449.028 ____
- The hundredth's place of 3449.028 ____
- The thousandth's place of 3449.028 ____

- 4 In the space below, write out the place value expansion for 4.382.

- 5 Determine the following without writing out an entire expansion.

- The tenth's place of 483.91 ____
- The hundredth's place of 100.137 ____
- The tenth's place of 607.312 ____
- The thousandth's place of 7801.2473 ____
- The ten-thousandth's place of 99067.23218 ____

Additional Resources:

- Khan Academy gives a very detailed explanation of Place Value: https://www.khanacademy.org/math/arithmetic/decimals/decimal_place_value/v/decimal-place-value
- A detailed solution to Problem #1: <https://www.youtube.com/watch?v=At9Swgn2Iwg&index=20&list=PLiADMg9o4gHkkZ>