MATHEMATICS · GRADES 4-6

Understanding decimal place value

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you read what each digit after the decimal point is worth, like knowing the difference between 2.5 dollars and 2.05 dollars, so money and measurements make sense. The first digit after the point is tenths, the next is hundredths, and each place is ten times smaller than the one before it. That is why 2.5 dollars is fifty cents more than 2.05 dollars, even though the numbers look close. Knowing place value keeps you from misreading a price, a measurement, or a score.



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Worked examples

EXAMPLE 1

Q In the number 3.74, what is the value of the 7?

SOLUTION

This is a place value question, so the one rule to remember is: the first place after the decimal point is tenths, and each place to the right is ten times smaller than the one before it.

The 7 is the first digit after the decimal point, so it sits in the tenths place.

Seven tenths is worth $7 \times 0.1 = 0.7$

EXAMPLE 2

Q In the number 2.35, what is the value of the 5?

SOLUTION

This is the same question type one place further right: the second place after the decimal point is hundredths.

The 5 is the second digit after the decimal point, so it sits in the hundredths place.

Five hundredths is worth $5 \times 0.01 = 0.05$

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Practice questions

1 In the number 5.62, which place is the 6 in?

- **A** Hundredths
- **B** Tenths
- **C** Ones
- **D** Thousandths

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2 What is the value of the 8 in the number 4.18?

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3 In the number 7.905, what is the value of the 9?

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4 Which digit is in the thousandths place in the number 3.456?

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5 Maria ran 3.5 miles. What does the 5 represent?

A 5 tenths

B 5 hundredths

C 5 ones

D 5 tens

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6 A rope is 4.567 metres long. What is the value of the 6?

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7 True or false: in 0.83, the 8 is worth 8 hundredths.

A True

B False

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8 Which is greater: the 4 in 2.47, or the 4 in 6.14?

A The 4 in 2.47

B The 4 in 6.14

C They are equal

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9 **In the number 12.34, what is the value of the 3?**

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10 **A number has 6 in the tenths place and 2 in the hundredths place, with 0 ones. What is the number?**

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ANSWER KEY

1. Tenths

2. 0.08

3. 0.9

4. 6

5. 5 tenths

6. 0.06

7. False

8. The 4 in 2.47

9. 0.3

10. 0.62

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