

Grade 3 Mathematics

DECIMALS

A fun, clear and progressive worksheet pack

■	■	□	□	□	□	□	□	□	□
■	■	■	■	□	□	□	□	□	□
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Name: _____

Skills: tenths • place value • comparing • number lines • money • problem solving

Teacher-friendly • Printable • Answer Key Included

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What Is a Decimal?

A decimal can show a part of one whole. In Grade 3, we will work mainly with tenths.

Each bar has 10 equal parts:

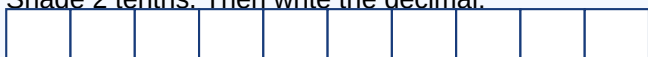


3 parts out of 10 = $\frac{3}{10}$ = 0.3

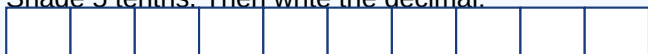


7 parts out of 10 = $\frac{7}{10}$ = 0.7

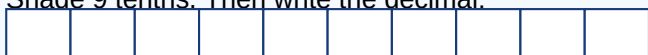
1. Shade 2 tenths. Then write the decimal:



2. Shade 5 tenths. Then write the decimal:



3. Shade 9 tenths. Then write the decimal:



4. Write the fraction for 0.4: _____
5. Write the fraction for 0.8: _____
6. Which is greater: 0.3 or 0.6? _____

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Read and Write Decimals

Read 0.4 as four tenths. The digit after the decimal point shows tenths.

1. Write the decimal: 3 tenths = _____
2. Write the decimal: 9 tenths = _____
3. Write the decimal: 1 tenth = _____
4. Write the decimal: 6 tenths = _____
5. Write the decimal: 8 tenths = _____
6. Write the decimal: 5 tenths = _____
7. Write in words: 0.2 = _____
8. Write in words: 0.7 = _____
9. Write in words: 0.9 = _____
10. Write in words: 0.5 = _____

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Tenths Place Value

Remember: in 4.7, 4 is the ones digit and 7 is the tenths digit.

ONES	TENTHS
3	4
8	2
5	9
1	6

1. Circle the tenths digit in 6.3.
2. What is the value of 7 in 2.7? _____
3. What is the value of 4 in 9.4? _____
4. Which has 5 tenths: 3.5 or 5.3? _____
5. Write a number with 8 ones and 2 tenths: _____
6. Write a number with 4 ones and 9 tenths: _____

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Compare Decimals

Compare the tenths when the whole-number parts are the same.

1. Use $>$, $<$ or $=$: 0.4 ____ 0.7
2. Use $>$, $<$ or $=$: 0.8 ____ 0.3
3. Use $>$, $<$ or $=$: 0.6 ____ 0.6
4. Use $>$, $<$ or $=$: 2.3 ____ 2.8
5. Use $>$, $<$ or $=$: 5.9 ____ 5.4
6. Use $>$, $<$ or $=$: 7.2 ____ 6.9
7. Order from smallest to greatest: 0.5 , 0.2 , 0.8
8. Order from greatest to smallest: 0.4 , 0.9 , 0.1
9. Order from smallest to greatest: 2.7 , 2.3 , 2.9
10. Circle the greater number: 4.6 or 4.2

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Fractions to Decimals

Tenths can be written as fractions or decimals.



$$1/10 = 0.1$$



$$5/10 = 0.5$$



$$9/10 = 0.9$$

1. Convert $2/10$ to a decimal: _____
2. Convert $7/10$ to a decimal: _____
3. Convert $3/10$ to a decimal: _____
4. Convert 0.6 to a fraction: _____
5. Convert 0.9 to a fraction: _____
6. Convert 0.2 to a fraction: _____
7. Which is larger: $4/10$ or 0.7? _____
8. Complete: $8/10 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ tenths

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Decimals on a Number Line

The number line from 0 to 1 is divided into 10 equal parts.



1. Mark 0.3 on the number line above.
2. Mark 0.7 on the number line above.
3. Which decimal is halfway between 0.4 and 0.6? _____
4. What decimal comes just after 0.8? _____
5. What decimal comes just before 0.5? _____
6. Complete: 0.1, 0.2, 0.3, _____, _____
7. Complete: 0.9, 0.8, 0.7, _____, _____

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Decimals in Everyday Money

Money helps us see decimals in real life. For example, \$2.50 means 2 dollars and 50 cents.

\$1.25

pencil set

\$2.50

notebook

\$3.75

game

\$4.20

book

1. Which costs more: \$1.25 or \$2.50?
2. How much do the pencil set and notebook cost altogether?
3. How much more does the game cost than the notebook?
4. Which is cheaper: the book or the game?
5. Write \$3 and 40 cents as a decimal: _____
6. Write \$5 and 7 cents as a decimal: _____

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Adding and Subtracting Simple Decimals

Add or subtract numbers with the same number of decimal places.

1. $0.3 + 0.2 =$ _____

2. $0.4 + 0.5 =$ _____

3. $0.7 + 0.1 =$ _____

4. $0.8 - 0.3 =$ _____

5. $0.9 - 0.4 =$ _____

6. $0.6 - 0.2 =$ _____

7. $1.2 + 0.5 =$ _____

8. $2.4 + 1.3 =$ _____

9. $3.8 - 1.5 =$ _____

10. $5.6 - 2.2 =$ _____

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Decimals in Real Life

1. A ribbon is 2.5 m long. Another ribbon is 1.2 m long. How long are they altogether?

Working: _____

2. Sam drinks 0.4 L of water in the morning and 0.3 L in the afternoon. How much does he drink altogether?

Working: _____

3. A toy costs \$4.50. Mia has \$6.00. How much money is left?

Working: _____

4. A runner travels 1.5 km in the morning and 2.3 km in the evening. What is the total distance?

Working: _____

5. A jug contains 3.5 L of juice. If 1.2 L is poured out, how much juice remains?

Working: _____

6. A pencil is 0.8 m long and a ruler is 0.3 m long. How much longer is the pencil?

Working: _____

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Decimal Detective Challenge

Think carefully. Show your working when needed.

1. I am a number between 0.4 and 0.6. I have 5 tenths. Who am I? _____
2. Which is closer to 1: 0.7 or 0.9? Explain briefly.
3. Create three different decimals greater than 2.5 but less than 3.0.
4. Put these in order: 1.4, 0.9, 1.9, 1.2, 0.4.
5. True or False? 0.8 is greater than 0.75. Explain using tenths/hundredths or money.
6. Find the missing number: $0.2 + \underline{\hspace{2cm}} = 0.9$
7. Find the missing number: $1.5 - \underline{\hspace{2cm}} = 1.0$
8. A shop has three prices: \$2.30, \$2.03 and \$2.33. Which is the greatest? Which is the smallest?
9. Write a decimal that has 6 ones and 4 tenths: _____
10. Write your own decimal question and solve it.

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Answer Key

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1) 0.2 2) 0.5 3) 0.9 4) $\frac{4}{10}$ 5) $\frac{8}{10}$ 6) 0.6

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1) 0.3 2) 0.9 3) 0.1 4) 0.6 5) 0.8 6) 0.5 7) two tenths 8) seven tenths 9) nine tenths 10) five tenths

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1) 3 2) 7 tenths (0.7) 3) 4 tenths (0.4) 4) 3.5 5) 8.2 6) 4.9

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1) $<$ 2) $>$ 3) $=$ 4) $<$ 5) $>$ 6) $>$ 7) 0.2, 0.5, 0.8 8) 0.9, 0.4, 0.1 9) 2.3, 2.7, 2.9 10) 4.6

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1) 0.2 2) 0.7 3) 0.3 4) $\frac{6}{10}$ 5) $\frac{9}{10}$ 6) $\frac{2}{10}$ 7) 0.7 8) $0.8 = \frac{8}{10} = 8$ tenths

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1) mark at 0.3 2) mark at 0.7 3) 0.5 4) 0.9 5) 0.4 6) 0.4, 0.5 7) 0.6, 0.5

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1) \$2.50 2) \$3.75 3) \$1.25 4) \$3.75 5) \$3.40 6) \$5.07

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1) 0.5 2) 0.9 3) 0.8 4) 0.5 5) 0.5 6) 0.4 7) 1.7 8) 3.7 9) 2.3 10) 3.4

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1) 3.7 m 2) 0.7 L 3) \$1.50 4) 3.8 km 5) 2.3 L 6) 0.5 m

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1) 0.5 2) 0.9; it is closer to 1 3) answers vary, e.g. 2.6, 2.7, 2.8 4) 0.4, 0.9, 1.2, 1.4, 1.9 5) False; 0.80 is greater than 0.75 6) 0.7 7) 0.5 8) greatest \$2.33; smallest \$2.03 9) 6.4 10) answers vary