

# Independent Recap

Decimals  
Week 7

Year 5

## Arithmetic

1.  $7 \times 6 \times 5$

2.  $\frac{2}{5}$  of 30

3.  $4.7 + 2.9$

4.  $3,482 \times 7$

## Practice: Decimals as Fractions

5. Recap: Explain how to convert decimal to a fraction (for example 0.3).



6. Convert these to fractions.

a. 0.2

b. 0.8

c. 0.5

7. Convert these to fractions.

a. 0.07

b. 0.03

c. 0.09

8. Convert these to fractions.

a. 0.96

b. 0.47

c. 0.30

9. Convert these to fractions over 100.

a. 0.4

b. 0.9

c. 0.7

10. Explain what the 4 means in this decimal.

4.02

What would the 4 mean if this was converted to a fraction?



11. Write the expanded form of this decimal as a fraction.

$4.25 = 4 + 0.2 + 0.05$

12. Expand this decimal and write it as a fraction.

6.07

13. Ruby needs to convert the decimal 1.03 to a fraction. She writes  $\frac{103}{10}$ .

Is Ruby correct? Explain.

## Challenge

14. Complete the number sentence in as many ways as possible.

$$\boxed{\phantom{00}} \cdot \boxed{\phantom{00}} \boxed{\phantom{00}} = \boxed{\phantom{00}} + \frac{\boxed{\phantom{00}}}{10} + \frac{\boxed{\phantom{00}}}{100}$$

You might want  
to talk to an adult

Spot the mistake

## Answers

Q no.	Question	Answer
1	$7 \times 6 \times 5$	210
2	$\frac{2}{5}$ of 30	12
3	$4.7 + 2.9$	7.6
4	$3,482 \times 7$	24,374
5	Explain how to convert decimal to a fraction (for example 0.3).	If the decimal has one decimal place, the digit in the tenths column becomes the numerator with the denominator of ten. If the decimal has two decimal places, the digits in the tenths and hundredths column become the numerator with one hundred as a denominator.
6	Convert these to fractions.	a. $\frac{2}{10}$ , b. $\frac{8}{10}$ , c. $\frac{5}{10}$
7	Convert these to fractions.	a. $\frac{7}{100}$ , b. $\frac{3}{100}$ , c. $\frac{9}{100}$
8	Convert these to fractions.	a. $\frac{96}{100}$ , b. $\frac{47}{100}$ , c. $\frac{30}{100}$ or $\frac{3}{10}$
9	Convert these to fractions over 100.	a. $\frac{40}{100}$ , b. $\frac{90}{100}$ , c. $\frac{70}{100}$
10	Explain what the 4 means in this decimal. 4.02 What would the 4 mean if this was converted to a fraction?	4 means 4 ones. As a fraction, the 4 would mean 4 wholes.
11	Write the expanded form of this decimal as a fraction.	$4 + \frac{2}{10} + \frac{5}{100}$
12	Expand this decimal and write it as a fraction.	$6 + 0.07 = 6 + \frac{7}{100}$
13	Ruby needs to convert the decimal 1.03 to a fraction. She writes $\frac{103}{10}$ . Is Ruby correct? Explain.	Ruby is incorrect. She has not understood that the digit 3 is in the hundredths column and therefore should have a denominator of 100. The 1 represents one whole. While it could be included in the fraction as an improper fraction, pupils should be encouraged to write as mixed number fractions.
14	Complete the number sentence in as many ways as possible.	Accept answers where the decimal is equivalent to the partitioned fraction. Example answers: $1.43 = 1 + \frac{4}{10} + \frac{3}{100}$ $9.72 = 9 + \frac{7}{10} + \frac{2}{100}$

## Arithmetic

1.  $9 \times 4 \times 6$

2.  $\frac{7}{8}$  of 72

3.  $6.8 + 9.5$

4.  $2,100 \div 4$

## Practice: Thousandths as Decimals

5. Recap: Explain what the difference is between thousandths and thousands.



6. Convert these to fractions.

a. 0.374

b. 0.401

c. 0.046

7. Convert these to fractions over 1,000.

a. 0.28

b. 0.63

c. 0.05

8. Convert these to fractions over 1,000.

a. 0.9

b. 0.1

c. 0.4

9. Write this as a decimal.

5 ones, 8 tenths, 2 hundredths and 7 thousandths

10. Are  $\frac{5}{10}$  and  $\frac{500}{1000}$  the same?

Explain your answer.

11. Convert these to decimals.

a.  $\frac{827}{1000}$

b.  $\frac{5}{1000}$

c.  $\frac{43}{1000}$

12. Convert these to decimals.

a.  $\frac{700}{1000}$

b.  $\frac{460}{1000}$

c.  $\frac{80}{1000}$

13.  $0.3 = \frac{3}{1000}$



Is this correct? Explain.

## Challenge

14. Give at least two examples and non-examples of a decimal with thousands and its equivalent fraction.

Example:

$$1.938 = 1 \frac{938}{1000}$$

Non-example:

$$1.3 = 1 \frac{3}{10}$$

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Spot the mistake

## Answers

Q no.	Question	Answer
1	$9 \times 4 \times 6$	216
2	$\frac{7}{8}$ of 72	63
3	$6.8 + 9.5$	16.3
4	$2,100 \div 4$	525
5	Explain what the difference is between thousandths and thousands.	Thousandths are much smaller than thousands. Thousandths mean one whole split into one thousand pieces, whereas one thousand means one thousand ones.
6	Convert these to fractions.	a. $\frac{374}{1000}$ , b. $\frac{401}{1000}$ , c. $\frac{46}{1000}$
7	Convert these to fractions over 1,000.	a. $\frac{280}{1000}$ , b. $\frac{630}{1000}$ , c. $\frac{50}{1000}$
8	Convert these to fractions over 1,000.	a. $\frac{900}{1000}$ , b. $\frac{100}{1000}$ , c. $\frac{400}{1000}$
9	Write this as a decimal.	5.827
10	Are $\frac{5}{10}$ and $\frac{500}{1000}$ the same? Explain your answer.	The two fractions are equivalent. $\frac{5}{10}$ has had the numerator and denominator multiplied by 100 to make $\frac{500}{1000}$ . If they were both converted to decimals, they would both be 0.5
11	Convert these to decimals.	a. 0.827, b. 0.005, c. 0.043
12	Convert these to decimals.	a. 0.7, b. 0.46, c. 0.08
13	Is this correct? Explain.	This is incorrect. 0.3 is equivalent to $\frac{3}{10}$ , $\frac{30}{100}$ , $\frac{300}{1000}$
14	Give at least two examples and non-examples of a decimal with thousands and its equivalent fraction.  Example: $1.938 = 1 \frac{938}{1000}$  Non-example: $1.3 = 1 \frac{3}{10}$	Accept answers where examples show decimals with thousandths and their fraction equivalent and non-examples show decimals without thousandths and their fraction equivalents (without one thousand as the denominator).  Examples: Example - $0.172 = \frac{172}{1000}$ , $1.111 = 1 \frac{111}{1000}$ Non-example - $1.43 = 1 \frac{43}{100}$ , $0.21 = \frac{21}{100}$

## Arithmetic

1.  $6 \times 9 \times 3$

2.  $\frac{3}{7}$  of 56

3.  $9.8 - 2.7$

4.  $1,536 \div 6$

## Practice: Rounding Decimals

5. Recap: Explain how to round decimals to the nearest whole number or tenth.



6. Round to the nearest whole number.

a. 3.2

b. 4.7

c. 6.5

7. Round to the nearest whole number.

a. 0.87

b. 9.55

c. 2.39

8. Round to the nearest whole number.

a. 1.284

b. 5.099

c. 7.501

9. Round to the nearest tenth.

a. 8.98

b. 2.05

c. 5.45

10. When rounding to the nearest tenth, 7.21 is rounded to 7.2 or 7.3.



Explain your answer.

11. Round to the nearest tenth.

a. 7.395

b. 3.018

c. 4.909

12. Round to the nearest tenth and whole number.

a. 5.55

b. 9.99

c. 3.582

13. Sumaya has rounded 8.85 to the nearest whole number. Her answer is 9.05. Explain her mistake.



## Challenge

14. Round 7.99 to the nearest tenth and nearest whole number.

What do you notice?

Write two more numbers that follow the pattern.

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Spot the mistake

## Answers

Q no.	Question	Answer
1	$6 \times 9 \times 3$	162
2	$\frac{3}{7}$ of 56	24
3	$9.8 - 2.7$	7.1
4	$1,536 \div 6$	256
5	Explain how to round decimals to the nearest whole number or tenth.	When rounding to the nearest whole number, look at the digit in the tenths column. If the digit is between 0 and 4, the ones stay the same. If the digit is between 5 and 9, the ones increase by one. The answer should be written without decimals. When rounding to the nearest tenth, look at the digit in the hundredths column. If the digit is between 0 and 4, the tenths stay the same. If the digit is between 5 and 9, the tenths increase by one. The answer should be written without hundredths.
6	Round to the nearest whole number.	a. 3, b. 5, c. 7
7	Round to the nearest whole number.	a. 1, b. 10, c. 2
8	Round to the nearest whole number.	a. 1, b. 5, c. 8
9	Round to the nearest tenth.	a. 9.0 or 9, b. 2.1, c. 5.5
10	When rounding to the nearest tenth, 7.21 is rounded to 7.2 or 7.3. Explain your answer.	When rounded to the nearest tenth, 7.21 is rounded to 7.2. This is because the one in the hundredths column indicates to round down.
11	Round to the nearest tenth.	a. 7.4, b. 3.0 or 3, c. 4.9
12	Round to the nearest tenth and whole number.	a. 5.6 and 6, b. 10.0 and 10, c. 3.6 and 4
13	Sumaya has rounded 8.85 to the nearest whole number. Her answer is 9.05. Explain her mistake.	Sumaya has not understood that when rounding to the nearest whole number, the decimals are not included in the answer. The correct answer is 9.
14	Round 7.99 to the nearest tenth and nearest whole number. What do you notice? Write two more numbers that follow the pattern.	7.99 rounded to the nearest tenth is 8. 7.99 rounded to the nearest whole number is 8. The pattern is that both times the number rounds to 8. Accept other number where rounding to the nearest tenth or nearest whole number, the answer is the same.

## Arithmetic

1.  $8 \times 7 \times 2$

2.  $\frac{4}{9}$  of 45

3.  $10.2 - 3.7$

4.  $5,712 \div 8$

## Practice: Order and Compare Decimals

5. Recap: Define the terms

ascending order

descending order

6. Use  $>$ ,  $<$  or  $=$  to compare the numbers.

$5.65 \square 6.56 \square 6.65 \square 5.56$

7. Use  $>$ ,  $<$  or  $=$  to compare the numbers.

$\frac{25}{100} \square 0.23 \square \frac{2}{10} \square 0.3$

8. Put these in ascending order.

$3.6 \quad 3.06 \quad 3.66 \quad 3.63$

9. Put these in ascending order.

$4.5 \quad 4.54 \quad 4.045 \quad 4.504$

10. Explain how to compare and order fractions with different numbers of decimal places.



11. Put these in descending order.

$9.19 \quad 9.1 \quad 9.09 \quad 9.9$

12. Put these in descending order.

$2.69 \quad 2.096 \quad 2.6 \quad 2.609$

13. Naveed has ordered these decimal numbers in ascending order.

2.2, 2.31, 2.59, 2.001, 2.174

Is Naveed correct? Explain.



Challenge

14. Complete these number sentences in as many ways as possible.

$$\begin{array}{ccccccc} \square & . & \square & \square & > & \square & .05 & \square \\ \square & .41 & \square & > & \square & . & \square & \square \end{array}$$

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to talk to an adult

Spot the mistake



## Answers

Q no.	Question	Answer
1	$8 \times 7 \times 2$	112
2	$\frac{4}{9}$ of 45	20
3	$10.2 - 3.7$	6.5
4	$5,712 \div 8$	714
5	Define the terms ascending order descending order	Ascending order means starting an ordered set of numbers with the smallest number. Each number will increase in value. Descending order means starting with the largest number and decreasing in value with each number in the order.
6	Use $>$ , $<$ or $=$ to compare the numbers.	$<$ and $<$ and $>$
7	Use $>$ , $<$ or $=$ to compare the numbers.	$>$ and $>$ and $<$
8	Put these in ascending order.	3.06, 3.6, 3.63, 3.66
9	Put these in ascending order.	4.045, 4.5, 4.504, 4.54
10	Explain how to compare and order fractions with different numbers of decimal places.	Some pupils will find it easier to make all the numbers they are comparing have the same number of decimal places by adding place holders (zeros). Pupils should understand that they need to compare numbers starting by comparing the highest value column first.
11	Put these in descending order.	9.9, 9.19, 9.1, 9.09
12	Put these in descending order.	2.69, 2.609, 2.6, 2.096
13	Is Naveed correct? Explain.	Naveed is incorrect. He has imagined that the digits are not decimals and ordered them accordingly. The correct order is: 2.001, 2.174, 2.2, 2.31, 2.59
14	Complete these number sentences in as many ways as possible.	Accept answers that satisfy the number sentence. Examples: $9.21 > 0.052$ $1.52 > 0.051$ $3.412 < 4.004$ $8.419 < 9.99$