

WA4MNADE1

Understanding number

Core + Challenge

Fraction–Decimal Equivalence

I can convert between fractions and decimals.

Name: _____ Date: _____ Score: / 53

Key idea

Converting a fraction to a decimal: if the denominator is 10, the digit after the decimal point is the numerator (e.g. $3/10 = 0.3$). If the denominator is 100, use two decimal places (e.g. $45/100 = 0.45$). Familiar fractions convert too: $1/2 = 0.5$, $1/4 = 0.25$, $3/4 = 0.75$.

A Fluency *practise the skill*

/16 marks

Convert each fraction to a decimal, or each decimal to a fraction.

1. $3/10$ _____

2. $7/10$ _____

3. $1/10$ _____

4. $9/10$ _____

5. $45/100$ _____

6. $8/100$ _____

7. $60/100$ _____

8. $12/100$ _____

9. $1/2$ _____

10. $1/4$ _____

11. $3/4$ _____

12. 0.4 _____

13. 0.07 _____

14. 0.9 _____

15. 0.35 _____

16. 0.5 _____

B Core *apply the skill to problems*

/21 marks

- 1 A quarter of a pizza is eaten. Write this as a decimal.

[3 marks]

Answer: _____

- 2 A ribbon is 0.6 m long. (a) Write this length as a fraction in tenths. (b) Write it as a fraction in its simplest form.

[4 marks]

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Answer: _____

3A jug is filled to $\frac{45}{100}$ of its capacity. Write this as a decimal.**[3 marks]**

Answer: _____

4

A runner completes 0.75 of a race. (a) Write this as a fraction in hundredths.
(b) Write it as a fraction in its simplest form.

[4 marks]

Answer: _____

5A recipe uses $\frac{7}{10}$ of a cup of milk. Write this as a decimal.**[3 marks]**

Answer: _____

6

A charity raises 0.08 of its \$100 target in week one. (a) Write this as a fraction in hundredths. (b) How many dollars is this?

[4 marks]

Answer: _____

C**Reasoning** *explain, justify and check***/9 marks****1**

Explain how to convert a fraction with denominator 10 into a decimal.

[2 marks]

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2

A student converts $\frac{3}{4}$ to a decimal by writing 3.4. Explain the student's error and give the correct decimal.

[2 marks]

3

Explain why $\frac{1}{2}$ and $\frac{5}{10}$ both convert to the same decimal, 0.5.

[2 marks]

4

A student says that any fraction can be converted to a decimal just by putting a decimal point in front of the numerator. Is this correct? Explain using $\frac{3}{4}$ as a counterexample.

[3 marks]

D

Challenge *multi-step and problem-solving*

/7 marks

1

Two fractions with denominator 100 add up to one whole. One fraction is $\frac{37}{100}$. What is the other, and what are both fractions as decimals?

[2 marks]

Answer: _____

2

List all the decimals with two decimal places, between 0 and 1, that are equivalent to a fraction with denominator 4.

[2 marks]

Answer: _____

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3

A fraction simplifies from $\frac{3}{20}$. Write this fraction with denominator 100, then as a decimal.

[3 marks]

Answer: _____

How did I go?

Fluency ____/16 Core ____/21 Reasoning ____/9 Challenge ____/7 **Total ____/53**

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