

LO: To identify equivalent fractions, decimals and percentages (bronze)

Practise - Convert these percentages into both a fraction and decimal, simplifying where possible.

- 1) 27%
- 2) 53%
- 3) 24%
- 4) 78%
- 5) 3%
- 6) 6%
- 7) 94%
- 8) 55%

Fluency

9) There are 200 Lego pieces in a box. Ted uses 114 of them to build a robot. Write the amount he used as a percentage out of 100.

10) There are 25 Smarties in a tube. 8 were eaten. How many are left? Write this as a fraction and as a decimal.

Reasoning

11) True or false? You can write 12.5% as a decimal. Explain your answer.

12) Lily has a 100 square. She colours in 25% of them and says 'I have coloured in  $\frac{1}{4}$ .' Is she right? Explain why?

13) Fill in the missing blanks to make the statement true. \_\_\_\_% = \_\_\_/100 = 0.1

14) Match the equivalent fractions, decimals and percentages.

$$\frac{15}{100}$$

$$0.05$$

$$5\%$$

$$\frac{1}{20}$$

$$0.5$$

$$15\%$$

$$\frac{1}{5}$$

$$0.2$$

$$50\%$$

$$\frac{1}{2}$$

$$0.15$$

$$20\%$$

LO: To identify equivalent fractions, decimals and percentages (silver)

Practise - Convert these percentages into both a fraction and decimal, simplifying where possible.

- 1) 94%
- 2) 55%
- 3) 68%
- 4) 50%
- 5) 20%
- 6) 45%

Fluency

- 7) Claire reads 150 pages of her 500 page book. She says 'I have 350/500 pages left to read.' Can she write this as a percentage out of 100? Explain why.
- 8) There are 400 Lego pieces in a box. Ted uses 248 of them to build a robot. Write the amount he used as a percentage out of 100.
- 9) Fill in the missing blanks to make the statement true. \_\_\_% = \_\_\_/100 = 0.06









Reasoning

- 10) True or false? You can write 87.5% as a decimal. Explain your answer.

Problem solving

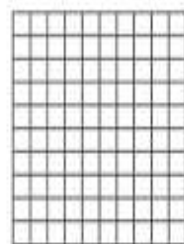
11)

Match the decimal cards to the people.

|  |   |
|--|---|
|  <p>My decimal is <math>\frac{4}{10}</math> less than 100%.</p>           |  |
|  <p>My decimal cannot be simplified when it is written as a fraction.</p> |  |
|  <p>My decimal is 10% less than <math>\frac{3}{4}</math></p>              |  |
|  <p>My decimal is greater than 60%.</p>                                   |  |

12)

a) Shade the grid in the given proportions.



- $\frac{3}{10}$  green
- 0.03 red
- 13% blue
- 0.3 yellow

b) What proportion of the grid is unshaded?

Write your answer as a fraction, decimal and percentage.

fraction =  decimal =  percentage =

LO: To identify equivalent fractions, decimals and percentages (gold)

Practise

1) Complete the table.

| Fraction       | Decimal | Percentage |
|----------------|---------|------------|
|                | 0.21    |            |
|                |         | 12%        |
| $\frac{2}{10}$ |         |            |
|                | 0.4     |            |
|                | 0.44    |            |
|                |         | 4%         |
| $\frac{3}{4}$  |         |            |
|                | 0.99    |            |

2) There are 400 Lego pieces in a box. Ted uses 248 of them to build a robot. Write the amount he used as a percentage out of 100.

3) Claire reads 275 pages of her 600 page book. She says 'I have 325/600 pages left to read.' Can she write this as a percentage out of 100? Explain why.

4) True or false? You can write 87.5% as a decimal. Explain your answer.

5) You have been asked by a friend to create questions that test their fluency on fractions, decimals and percentages. Your challenge is to create as many questions as you can that test their fluency (look at your questions for ideas if you are struggling)

6) Use the digit cards to write a decimal greater than  $\frac{1}{5}$  but less than 40%.

You may not use a card more than once in each number.



.

How many other answers can you find?

LO: To identify equivalent fractions, decimals and percentages (bronze) - answers

Practise Convert these percentages into both a fraction and decimal, simplifying where possible.

- 1) 0.27 27/100
- 2) 0.53 53/100
- 3) 0.24 24/100 12/50 6/25
- 4) 0.78 78/100 39/50
- 5) 0.03 3/100
- 6) 0.06 6/100 3/50
- 7) 0.94 94/100 47/50
- 8) 0.55 55/100 11/20

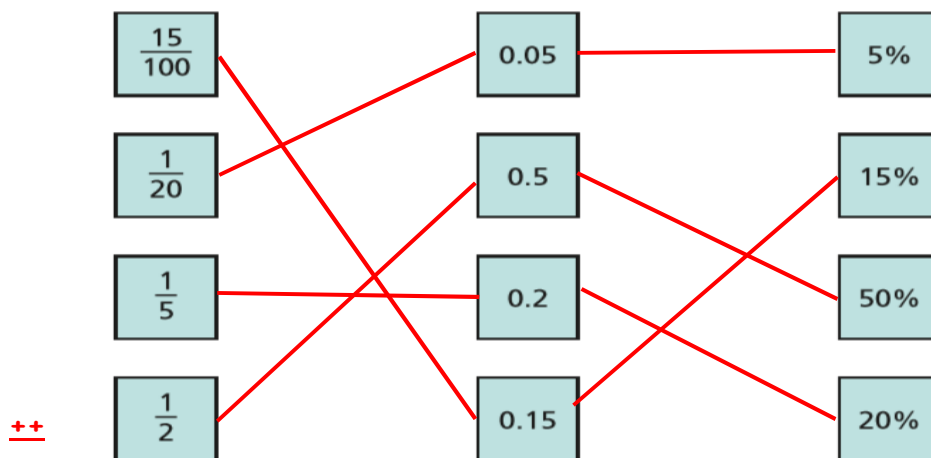
Fluency

- 9) 57%
- 10) 17 - 17/25 (68/100) 0.68

Reasoning

- 11) True - 0.125
- 12) Yes because 1/4 and 25% are the same
- 13) Fill in the missing blanks to make the statement true. 10% = 10/100 = 0.1
- 14)

Match the equivalent fractions, decimals and percentages.



LO: To identify equivalent fractions, decimals and percentages (silver) - answers

Practise Convert these percentages into both a fraction and decimal, simplifying where possible.

- 1) 0.94    94/100    47/50
- 2) 0.55    55/100    11/20
- 3) 0.68    68/100    34/50    17/25
- 4) 0.50    50/100    1/2
- 5) 0.20    20/100    1/5
- 6) 0.45    45/100    9/20

**Fluency**

- 7) 70%
- 8) 62%
- 9) Fill in the blanks to make the statement true. 6% = 6/100 = 0.06

**Reasoning**

- 1/0) True - 0.875

**Problem solving**

11)

Match the decimal cards to the people.

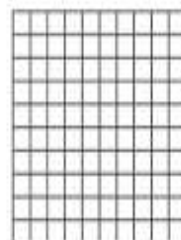
Person 1: My decimal is  $\frac{4}{10}$  less than 100%.   
 Person 2: My decimal cannot be simplified when it is written as a fraction.   
 Person 3: My decimal is 10% less than  $\frac{3}{4}$ .   
 Person 4: My decimal is greater than 60%.

Decimal cards: 0.65, 0.57, 0.61, 0.6

Connections: Person 1 to 0.65, Person 2 to 0.57, Person 3 to 0.61, Person 4 to 0.6

12)

a) Shade the grid in the given proportions.



- $\frac{3}{10}$  green
- 0.03 red
- 13% blue
- 0.3 yellow

b) What proportion of the grid is unshaded?

Write your answer as a fraction, decimal and percentage.

fraction =  $\frac{24}{100}$     decimal = 0.24    percentage = 24%

LO: To identify equivalent fractions, decimals and percentages (gold) - answers

Complete the table.

| Fraction                         | Decimal | Percentage |
|----------------------------------|---------|------------|
| $\frac{21}{100}$                 | 0.21    | 21%        |
| $\frac{12}{100} = \frac{3}{25}$  | 0.12    | 12%        |
| $\frac{2}{10}$                   | 0.2     | 20%        |
| $\frac{4}{10} = \frac{2}{5}$     | 0.4     | 40%        |
| $\frac{44}{100} = \frac{11}{25}$ | 0.44    | 44%        |
| $\frac{4}{100} = \frac{1}{25}$   | 0.04    | 4%         |
| $\frac{3}{4}$                    | 0.75    | 75%        |
| $\frac{99}{100}$                 | 0.99    | 99%        |

2) 62%

3) No because you would need to divide 600 by 6 to make a denominator of 100 and 325 isn't divisible by 6

4) True - 0.875

5) Questions will vary

6) Answers will vary e.g. 0.23, 0.35

Use the digit cards to write a decimal greater than  $\frac{1}{5}$  but less than 40%.

You may not use a card more than once in each number.



.

How many other answers can you find?