

N32N33 Equivalent & Simplifying Fractions

OCR

10 (a) Write $\frac{16}{112}$ in its lowest terms.

(a)**[1]**

10 (a) Write $\frac{16}{112}$ in its lowest terms.

(a) $\frac{1}{7}$ [1]

9 Danisha is going to visit two of these places.

London Eye (LE) Buckingham Palace (BP) Tower of London (TL) British Museum (BM)

(a) List all the combinations of these places that she can visit.
One combination is already shown in the table.

N49 You may not need all the rows. [2]

LE	BP

(b) What fraction of the combinations include the London Eye (LE)?

N32

(b) [1]

9 Danisha is going to visit two of these places.

London Eye (LE) ✓ Buckingham Palace (BP) ✓ Tower of London (TL) British Museum (BM)

- (a) List all the combinations of these places that she can visit.
One combination is already shown in the table.

N49 You may not need all the rows. [2]

LE	BP ✓
LE	TL ✓
LE	BM ✓
BP	TL
BP	BM
TL	BM

- (b) What fraction of the combinations include the London Eye (LE)?

N32

6 comb

$$\frac{3}{6}$$

(b) [1]



- 4 Jeat is growing carrots from seed in his garden.
He plants 28 carrot seeds but only 12 grow.

Jeat says

The probability of one of my carrot seeds growing is $\frac{3}{7}$.

- (a) Use Jeat's result to show that he is correct.

[1]

N32

- 4 Jeat is growing carrots from seed in his garden.
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- (a) Use Jeat's result to show that he is correct.

[1]

N32

$$\frac{12}{28} = \frac{3}{7}$$

The diagram shows the fraction $\frac{12}{28}$ on the left and $\frac{3}{7}$ on the right, with an equals sign between them. Two purple arrows point from the left fraction to the right fraction. The top arrow is labeled $\div 4$ and the bottom arrow is also labeled $\div 4$, indicating that both the numerator and denominator of the left fraction were divided by 4 to simplify it to the right fraction.

fractions are
equal

Edexcel

15 There are 360 golf balls in a bucket.
There are

60 yellow golf balls

50 orange golf balls

40 pink golf balls

The rest of the golf balls are white.

What fraction of the golf balls are white?

Give your fraction in its simplest form.

.....
(Total for Question 15 is 3 marks)

15 There are 360 golf balls in a bucket.

There are

60 yellow golf balls

50 orange golf balls

40 pink golf balls

} 150 golf balls

The rest of the golf balls are white.

What fraction of the golf balls are white?

Give your fraction in its simplest form.

$$\begin{array}{r} 360 \\ - 150 \\ \hline 210 \text{ left} \end{array}$$

$$\frac{210}{360} = \frac{21}{36} = \frac{7}{12} \checkmark$$

.....
(Total for Question 15 is 3 marks)

Created by W Neill

1 $\frac{3}{5}$ of the people at a tennis club are women.

The rest of the people are men.

What fraction of the people are men?

.....
(Total for Question 1 is 1 mark)

Created by W Neill

- 1 $\frac{3}{5}$ of the people at a tennis club are women.

The rest of the people are men.

What fraction of the people are men?

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

$$\frac{2}{5}$$

(Total for Question 1 is 1 mark)

Created by W Neill

3 Here is a list of fractions.

$$\frac{3}{9} \quad \frac{5}{15} \quad \frac{7}{21} \quad \frac{9}{30} \quad \frac{15}{45}$$

One of these fractions is **not** equivalent to $\frac{1}{3}$

Which fraction?

.....
(Total for Question 3 is 1 mark)

3 Here is a list of fractions.

$$\frac{3}{9} \quad \frac{5}{15} \quad \frac{7}{21} \quad \frac{9}{30} \quad \frac{15}{45}$$

One of these fractions is **not** equivalent to $\frac{1}{3}$

Which fraction?

$$\frac{3}{9} = \frac{1}{3} \quad \checkmark$$

(Handwritten annotations: a red arrow points from the question to the 3 in the numerator of 3/9, and another red arrow points from the 3 in the denominator of 1/3 to the 3 in the denominator of 3/9. A red checkmark is next to the equation.)

$$\frac{9}{30}$$

(Handwritten fraction 9/30 with a dotted line underneath.)

(Total for Question 3 is 1 mark)

5 Write $\frac{6}{15}$ as a fraction in its simplest form.

N33

.....
(Total for Question 5 is 1 mark)

5 Write $\frac{6}{15}$ as a fraction in its simplest form.

N33

$$\frac{6}{15} = \frac{2}{5}$$

$$\frac{2}{5}$$

(Total for Question 5 is 1 mark)

5 60 students were asked how they get to school.

The table shows the results.

	Bus	Walk	Car	Bicycle
Number of students	15	27	12	6

(a) What fraction of the 60 students did **not** walk to school?

.....
(2)

5 60 students were asked how they get to school.

The table shows the results.

	Bus	Walk	Car	Bicycle
Number of students	15	27	12	6

(a) What fraction of the 60 students did **not** walk to school?

$$\frac{33}{60}$$

$$\frac{33}{60} \dots\dots (2)$$

4 Here is a list of four fractions.

N32

$$\frac{4}{16}$$

$$\frac{2}{8}$$

$$\frac{15}{60}$$

$$\frac{3}{9}$$

One of these fractions is **not** equivalent to $\frac{1}{4}$

Write down this fraction.

.....
(Total for Question 4 is 1 mark)

4 Here is a list of four fractions.

N32

$$\frac{1}{4} \xrightarrow{\times 4} \frac{4}{16}$$

$$\frac{1}{4} \xrightarrow{\times 2} \frac{2}{8}$$

$$\frac{1}{4} \xrightarrow{\times 15} \frac{15}{60}$$

$$\frac{1}{4} \xrightarrow{\times 3} \frac{3}{12} \xrightarrow{\times 3} \frac{9}{36}$$

One of these fractions is not equivalent to $\frac{1}{4}$

Write down this fraction.

$$\frac{3}{9}$$

(Total for Question 4 is 1 mark)

- 11** Last year the cost of a season ticket for a football club was £560
This year the cost of a season ticket for the club has been increased to £600

Write down the increase in the cost of a season ticket as a fraction of last year's cost.

N32
N33

.....
(Total for Question 11 is 2 marks)

- 11 Last year the cost of a season ticket for a football club was £560
This year the cost of a season ticket for the club has been increased to £600

Write down the increase in the cost of a season ticket as a fraction of last year's cost.

N32
N33

£40

£560

$$\frac{40}{560}$$

$$\frac{40}{560} \checkmark$$

(Total for Question 11 is 2 marks)

11 Here are some fractions.

$$\frac{9}{12} \quad \frac{6}{8} \quad \frac{18}{24} \quad \frac{10}{16} \quad \frac{15}{20}$$

One of these fractions is **not** equivalent to $\frac{3}{4}$

(a) Which fraction?

N32

11 Here are some fractions.

$$\begin{array}{ccccc}
 \times 3 & \frac{9}{12} & \times 2 & \frac{6}{8} & \times 6 & \frac{18}{24} & \frac{10}{16} & \frac{15}{20} \\
 \times 3 & \checkmark & \times 2 & \checkmark & \times 6 & \checkmark & \text{circled} &
 \end{array}$$

One of these fractions is **not** equivalent to $\frac{3}{4}$

(a) Which fraction?

N32

$$\frac{10}{16}$$

$$\frac{10}{16} \text{ (1)}$$

AQA

6 (b) What fraction of the 500 people drink at least three cups of coffee each day?

N33

Give your answer in its simplest form.

[2 marks]

Answer _____

25

The height of Zak is 1.86 metres.

The height of Fred is 1.6 metres.

R1

N33

Write the height of Zak as a fraction of the height of Fred.

Give your answer in its simplest form.

[3 marks]

Answer _____

25

The height of Zak is 1.86 metres.

The height of Fred is 1.6 metres.

R1

N33

Write the height of Zak as a fraction of the height of Fred.

Give your answer in its simplest form.

[3 marks]

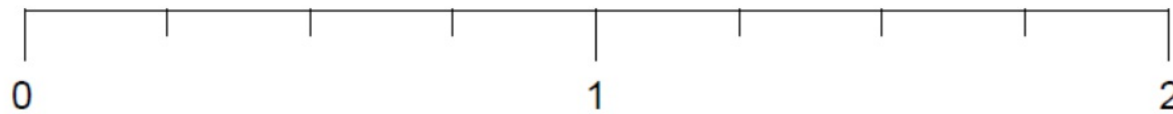
$$\frac{\text{Zak}}{\text{Fred}} = \frac{1.86}{1.6} = \frac{186}{160} = \frac{93}{80}$$

Answer _____

$$\frac{93}{80} \text{ or } \frac{13}{80} \checkmark$$

9 Work out the fraction that is halfway between $\frac{1}{2}$ and $1\frac{1}{4}$

N32
N42



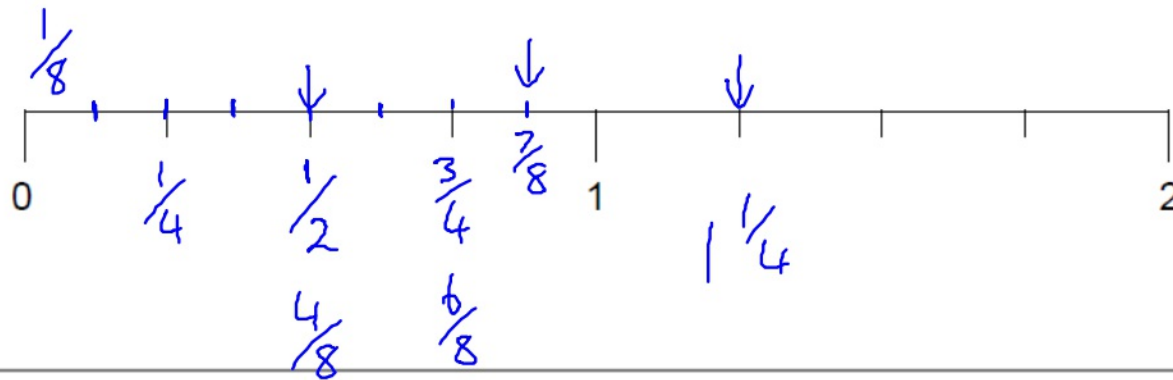
[3 marks]

Answer _____

9

Work out the fraction that is halfway between $\frac{1}{2}$ and $1\frac{1}{4}$

N32
N42



[3 marks]

Answer

$\frac{7}{8}$ ✓

9

The table shows the number of messages Sam received each day for five days.

Video created by W Neill

	Messages	
	Number of emails	Number of texts
Monday	12	5
Tuesday	8	6
Wednesday	10	3
Thursday	6	6
Friday	12	4

9 (b) In total, what fraction of the messages were emails?

Give your answer in its simplest form.

[3 marks]

N32

Answer _____

