N34 Comparing and Ordering Fractions

OCR

8   (a)   By converting each fraction to a percentage, show that $\frac{9}{20}$ is bigger than $\frac{11}{25}$.   [2]

8   (a)   By converting each fraction to a percentage, show that $\frac{9}{20}$ is bigger than $\frac{11}{25}$.   [2]

$\overset{\times 5}{\frac{9}{20}} = \frac{45}{100} = 45\%$

$\overset{\times 4}{\underset{\times 4}{\frac{11}{25}}} = \frac{44}{100} = 44\%$

(b) Show that $\dfrac{4}{5}$ is bigger than $\dfrac{7}{9}$.

....

.... **[2]**

(c) Find a fraction which is bigger than $\dfrac{1}{5}$ and smaller than $\dfrac{1}{4}$.

(c) .... **[2]**

(b) Show that $\frac{4}{5}$ is bigger than $\frac{7}{9}$.

$$\frac{36}{45} > \frac{35}{45} \checkmark$$

....

.... **[2]**

(c) Find a fraction which is bigger than $\frac{1}{5}$ and smaller than $\frac{1}{4}$.

$\frac{4}{20}$ $\frac{5}{20}$

$\frac{8}{40}$ **(c)** $\frac{10}{40}$ $\frac{9}{40}$ .... **[2]**

2 **(a)** Work out $\frac{2}{7}+\frac{1}{7}$.

(a) .... **[1]**

(b) The fraction $\frac{n}{16}$ is between $\frac{1}{4}$ and $\frac{1}{2}$,

Write down all the possible values of n.

(b) .... **[2]**

2 **(a)** Work out $\frac{2}{7} + \frac{1}{7}$.

(a) $\frac{3}{7}$ .... **[1]**

(b) The fraction $\frac{\textcircled{n}}{16}$ is between $\frac{1}{4}$ and $\frac{1}{2}$,

Write down all the possible values of n.

$\frac{1}{4}$ $\frac{1}{2}$

$\frac{4}{16}$ $\frac{5}{16}$ $\frac{6}{16}$ $\frac{7}{16}$ $\frac{8}{16}$

(b) 5, 6 and 7 .... **[2]**

Edexcel

4   Here are four fractions.

$$\frac{2}{5} \qquad \frac{11}{30} \qquad \frac{1}{2} \qquad \frac{7}{15}$$

Write these fractions in order of size.
Start with the smallest fraction.

....

(Total for Question 4 is 2 marks)

4 Here are four fractions.

$$\frac{2}{5} \qquad \frac{11}{30} \qquad \frac{1}{2} \qquad \frac{7}{15}$$

Write these fractions in order of size.
Start with the smallest fraction.

$\times 6 \quad \dfrac{12}{30} \qquad \dfrac{11}{30} \qquad \dfrac{15}{30} \qquad \dfrac{14}{30}$

$\dfrac{11}{30}, \dfrac{2}{5}, \dfrac{7}{15}, \dfrac{1}{2}$

(Total for Question 4 is 2 marks)

6 Here are four fractions.

$$\frac{3}{4} \qquad \frac{5}{7} \qquad \frac{19}{25} \qquad \frac{11}{15}$$

Write the fractions in order of size.
Start with the smallest fraction.

(Total for Question 6 is 2 marks)

6 Here are four fractions.

0.75   0.714   0.76   0.73

N34

N46

$$\frac{3}{4} \qquad \frac{5}{7} \checkmark \qquad \frac{19}{25} \qquad \frac{11}{15} \checkmark$$

Decimals

Write the fractions in order of size.
Start with the smallest fraction.

$$\frac{5}{7}, \ \frac{11}{15}, \ \frac{3}{4}, \ \frac{19}{25} \checkmark$$

(Total for Question 6 is 2 marks)

AQA

3 Circle the fraction **greater** than $\dfrac{3}{10}$

N34

[1 mark]

$$\dfrac{1}{3} \qquad \dfrac{3}{11} \qquad \dfrac{4}{15} \qquad \dfrac{29}{100}$$

3 Circle the fraction **greater** than $\frac{3}{10}$ 0·3

N34

[1 mark]

$\frac{1}{3}$ $\frac{3}{11}$ $\frac{4}{15}$ $\frac{29}{100}$
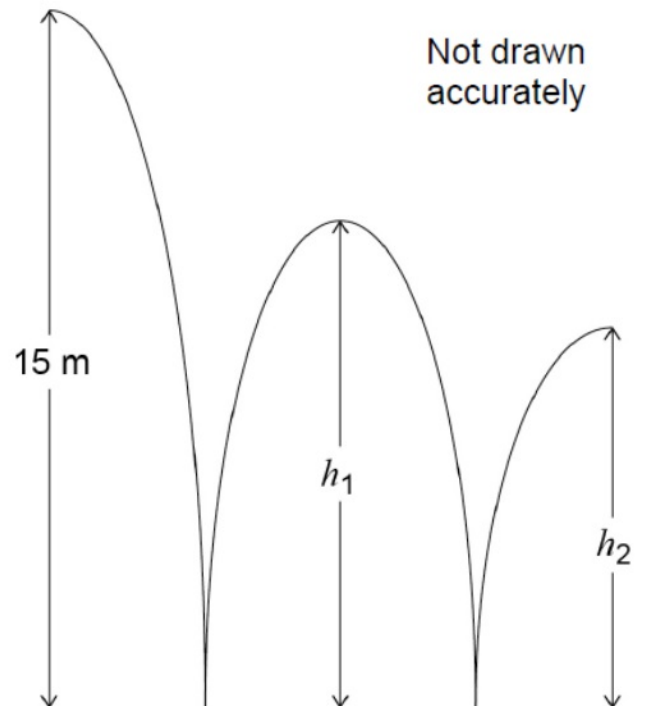
0·333   0·2̇7̇   0·26̇   0·29

26   A ball is thrown from a height of 15 metres.

It bounces to height h_1, then to height h_2 as shown.

Not drawn
accurately

15 m

h_1

h_2

h_1 is three quarters of the original height.

26 (b) N34

In fact, h_2 is two thirds of h_1

How does this affect the answer to part (a)?

Tick a box.

☐   The ball bounced higher than he expected
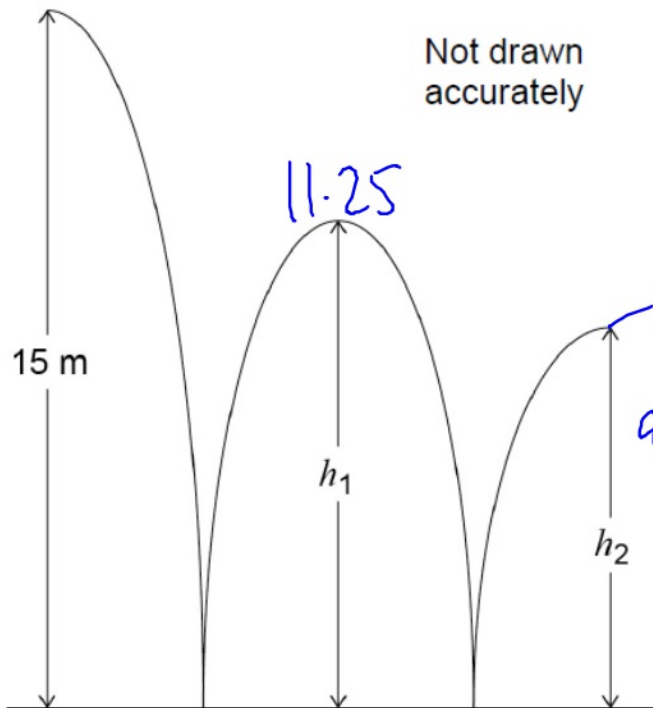
☐   The ball bounced lower than he expected

Show working to support your answer.   **[2 marks]**

A ball is thrown from a height of 15 metres.

It bounces to height h_1, then to height h_2 as shown.

Not drawn
accurately

11.25

15 m

h_1

h_2

h_1 is three quarters of the original height.

(b) N34

In fact, h_2 is two thirds of h_1

How does this affect the answer to part (a)?

Tick a box.

— thought ¾

☐ The ball bounced higher than he expected

actual
⅔

☑ The ball bounced lower than he expected

Show working to support your answer.   **[2 marks]**

$\frac{2}{3} < \frac{3}{4}$

$\frac{2}{3} < \frac{3}{4}$

$\frac{8}{12}$ $\frac{9}{12}$