

N30N31 Multiply Divide Decimals

OCR

3 (a) Nathan works out 23×12.4 without a calculator.

This is Nathan's working.

$10 \times 12.4 = 12.40$
$20 \times 12.4 = 24.80$
$3 \times 12.4 = 37.2$
$23 \times 12.4 = 24.80 + 37.2 = 62$

Nathan's working is incorrect.

Explain the error that Nathan has made and work out the correct answer.

.....

.....

..... [3]

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error
 $10 \times 12.4 = 124$

Nathan's working is incorrect.

Explain the error that Nathan has made and work out the correct answer.

$10 \times 12.4 = 124$
 $20 \times 12.4 = 248$
 $3 \times 12.4 = 37.2$

248.0
 $+ 37.2$

 285.2

285.2 ✓

[3]

2 (a) Write these fractions as decimals.

N46 (i) $\frac{9}{10}$

(a)(i) [1]

(ii) $\frac{3}{4}$

(ii) [1]

(b) A plank of wood 2.4 m long is cut into 6 pieces of equal length.

N31 How long is each piece?

(b) m [2]

2 (a) Write these fractions as decimals.

N43 (i) $\frac{9}{10}$

(a)(i) 0.9 [1]

N45 (ii) $\frac{3}{4}$

Handwritten long division for $\frac{3}{4}$: $4 \overline{) 3.000}$ with quotient 0.75 and remainder 0.

(ii) 0.75 [1]

(b) A plank of wood 2.4m long is cut into 6 pieces of equal length.

N31 How long is each piece?

Handwritten long division for $\frac{2.4}{6}$: $6 \overline{) 2.4}$ with quotient 0.4 and remainder 0.

Handwritten answer: 40cm ✓

(b) 0.4 m [2]

12 (a) Work out.

N31

$$8 \div 0.4$$

(a) [2]

12 (a) Work out.

N31

$8 \div 0.4$

$$\frac{8}{0.4} = \frac{80}{4} \quad \text{(a)} \quad \dots\dots\dots \frac{20}{\checkmark} \quad \text{[2]}$$

Edexcel

7 Work out $\text{£}3.89 \times 5$

£

(Total for Question 7 is 2 marks)

7 Work out $\pounds 3.89 \times 5$

$$\begin{array}{r}
 13.89 \\
 \times 5 \\
 \hline
 19.45
 \end{array}$$

x	300	80	9
S	1500	400	45

1945p

£

£ 19.45

(Total for Question 7 is 2 marks)

Video created by W Neill

23 Work out 54.6×4.3

.....
(Total for Question 23 is 3 marks)

23 Work out 54.6×4.3

546×43

$$\begin{array}{r}
 546 \\
 \times 43 \\
 \hline
 1638 \\
 21840 \\
 \hline
 23478 \checkmark
 \end{array}$$

	<u>500</u>	40	6	20000
<u>40</u>	20000	1600	240	1840
3	1500	120	18	1620
				+ .18
				<u>23478</u>

234.78 ✓

(Total for Question 23 is 3 marks)

21 Work out $\frac{0.06 \times 0.0003}{0.01}$

Give your answer in standard form.

.....
(Total for Question 21 is 3 marks)

21 Work out $\frac{0.06 \times 0.0003}{0.01}$

Give your answer in standard form.

$$0.06 \times 0.0003 = 0.000018$$

$$\frac{0.000018}{0.01} = \frac{0.0018}{1} = 0.0018$$

(Handwritten notes: Red arrows labeled 'x100' show the conversion of 0.000018 to 0.0018 by multiplying both numerator and denominator by 100.)

$$0.0018$$

$$1.8 \times 10^{-3}$$

(Total for Question 21 is 3 marks)

AQA

9 Work out $25.68 \div 12$

N11

N31

[2 marks]

Answer _____

9 Work out $25.68 \div 12$

N11
N31

[2 marks]

$$\begin{array}{r} 2.14 \\ \hline 12 \overline{) 25.68} \end{array}$$

2.14 ✓

Answer _____

9 Work out $25.68 \div 12$

N11
N31

[2 marks]

$$\begin{array}{r} 2.14 \\ \hline 12 \overline{) 25.68} \end{array}$$

2.14 ✓

Answer _____