

N10 Multiplying Integers

OCR

18 (a) Factorise.

$$x^2 - 43^2$$

(a) **[1]**

(b) Calculate.

$$57^2 - 43^2$$

(b) **[2]**

18 (a) Factorise.

$$x^2 - 43^2$$

$$(x + 43)(x - 43)$$

(a) [1]

(b) Calculate.

$$57^2 - 43^2 \checkmark$$

$$(57 + 43)(57 - 43)$$

$$(100)(14)$$

$$1400$$

$$\begin{array}{r} 57 \\ \times 57 \\ \hline 399 \\ 2850 \\ \hline 3249 \end{array} \quad \begin{array}{r} 43 \\ \times 43 \\ \hline 129 \\ 1720 \\ \hline 1849 \end{array} \checkmark$$

$$\begin{array}{r} 3249 \\ 1849 \\ \hline 1400 \end{array}$$

(b) 1400 [2]

(b) 17×21

N10

(b) [2]

(b) 17×21

N10

$$\begin{array}{r} 17 \\ \times 21 \\ \hline 17 \\ 340 \\ \hline 357 \end{array}$$

(b) 357 [2]

Edexcel

14 Work out 172×34

.....

(Total for Question 14 is 3 marks)

14 Work out 172×34

$\times$	100	70	2
30	3000	2100	60
4	400	280	8

$$\begin{array}{r} 5160 \\ 688 \\ \hline 5848 \end{array}$$

$$\begin{array}{r} 172 \\ \times 34 \\ \hline 688 \\ 5160 \\ \hline 5848 \end{array}$$

.....

(Total for Question 14 is 3 marks)

16 Berenika wants to buy 35 T-shirts.

Each T-shirt costs £5.80

Berenika does the calculation $40 \times 6 = 240$ to estimate the cost of 35 T-shirts.

(a) Explain how Berenika's calculation shows the actual cost will be less than £240

.....
.....
(1)

16 Berenika wants to buy 35 T-shirts.

Each T-shirt costs £5.80

Berenika does the calculation $40 \times 6 = 240$ to estimate the cost of 35 T-shirts.

(a) Explain how Berenika's calculation shows the actual cost will be less than £240

$$40 \times 6 = 240$$

actual $35 \times 5.80 \dots$ must be less than £240 as both
numbers are lower than 40 and 6

(1)

11 Work out 74×58

N10

.....

(Total for Question 11 is 2 marks)

11 Work out 74×58

N10

	70	4
50	3500	200
8	560	32

$$\begin{array}{r} 3700 \\ + 592 \\ \hline 4292 \\ 1 \end{array}$$

4292

(Total for Question 11 is 2 marks)

8 Prasha has five blocks of wood.

R2 The total weight of all five blocks of wood is 3 kilograms.

N10 4 of the blocks of wood each have a weight of 650 grams.

Work out the weight, in grams, of the other block of wood.

..... grams

(Total for Question 8 is 3 marks)

8 Prasha has five blocks of wood.

R2 The total weight of all five blocks of wood is 3 kilograms.

N10 4 of the blocks of wood each have a weight of 650 grams.

Work out the weight, in grams, of the other block of wood.

3000g

650
x 4

2600g

left

3000g - 2600g

400

grams

(Total for Question 8 is 3 marks)

14 Work out 23×15

N10

.....

(Total for Question 14 is 2 marks)

14 Work out 23×15

N10

$$\begin{array}{r} 23 \\ \times 15 \\ \hline 115 \\ 230 \\ \hline 345 \end{array}$$

$$\begin{array}{r} 23 \times 10 = 230 \\ 23 \times 5 = 115 \\ \hline 345 \end{array}$$

345

(Total for Question 14 is 2 marks)

AQA

5

Work out

$$58 \times 73$$

N/A

[3 marks]

Answer _____

5

Work out

58×73

N10

[3 marks]

$$\begin{array}{r}
 58 \\
 \times 73 \\
 \hline
 174 \\
 4060 \\
 \hline
 4234
 \end{array}$$

	50	8
70	3500	560
3	150	24

$$\begin{array}{r}
 3650 \\
 + 584 \\
 \hline
 4234
 \end{array}$$

Answer

4234 ✓

5

Work out

$$83 \times 26$$

[3 marks]

N10

Answer _____

5

Work out

83×26

[3 marks]

N10

$$\begin{array}{r} 83 \\ \times 26 \\ \hline 498 \\ 1660 \\ \hline 2158 \end{array}$$

Answer

2158 ✓

10 (b) From a different city 13 coaches are needed.

N10

Each coach costs £450 to hire.

Work out the total cost of hiring 13 coaches.

[3 marks]

Answer £ _____

10 (b) From a different city 13 coaches are needed.

N10

Each coach costs £450 to hire.

Work out the total cost of hiring 13 coaches.

[3 marks]

$$\begin{array}{r} 450 \\ \times 13 \\ \hline 1350 \\ 4500 \\ \hline 5850 \end{array}$$

Answer £ 5850

5

Work out 76×24

[3 marks]

N10

Answer _____

5

Work out 76×24

[3 marks]

N10

$$\begin{array}{r} 76 \\ \times 24 \\ \hline 304 \\ 1520 \\ \hline 1824 \end{array}$$

Answer

1824

7

Work out $(43 \times 8) - (234 \div 6)$

[3 marks]

N10

N11

N6

Answer _____

7

Work out $(43 \times 8) - (234 \div 6)$

[3 marks]

N10

N11

N6

$$\begin{array}{r} 43 \\ \times 8 \\ \hline 344 \end{array}$$

$$\begin{array}{r} 039 \\ 6 \overline{) 234} \end{array}$$

$$\begin{array}{r} 305 \\ - 39 \\ \hline 305 \end{array}$$

305

Answer

10

Pavel uses his calculator to work out 352×7268

N10

Circle the **last** digit in the answer.

[1 mark]

0

2

6

8

10

N10

Pavel uses his calculator to work out $\underline{352} \times \underline{7268}$

$$2 \times 8 = 16$$

Circle the **last** digit in the answer.

[1 mark]

0

2

6

8

9

N10

N11

School A has 72 tutor groups.

Each group has 28 students.

School B has 16 tutor groups.

Each group has 18 students.

Show that $\frac{\text{number of students at school A}}{\text{number of students at school B}}$ is a whole number.

[2 marks]

9

N10

N11

School A has 72 tutor groups.

Each group has 28 students.

$$\rightarrow 72 \times 28 = 2016$$

School B has 16 tutor groups.

Each group has 18 students.

$$\rightarrow 288$$

Show that $\frac{\text{number of students at school A}}{\text{number of students at school B}}$ is a whole number.

[2 marks]

$$\frac{2016}{288} = 7 \quad \checkmark$$