REVISE THIS TOPIC

1 Increase 150 by 10% **[2 marks]**

$10\% = 15$ $150 + 15 = 165$

Answer ___165___

2 Decrease 4000 by 1% **[2 marks]**

$1\% = 40$ $4000 - 40$
                $= 3960$

Answer ___3960___

3 Increase 66 by 50% **[2 marks]**

$50\% = 33$ $66 + 33 = 99$

Answer ___99___

$\frac{}{6}$

4 Decrease 420 by 20% **[3 marks]**

$\times 2 \begin{cases} 10\% = 42 \\ 20\% = 84 \end{cases} \times 2$ $420 - 84 = 336$

Answer 336

5 Increase 80 by 15% **[3 marks]**

$$10\% = 8$$
$$5\% = 4$$
$$\overline{15\% = 12}$$

$80 + 12 = 92$

Answer 92

6 Decrease 250 by 30% **[3 marks]**

$\times 3 \begin{cases} 10\% = 25 \\ 30\% = 75 \end{cases} \times 3$ $250 - 75 = 175$

Answer 175

7 Increase 3650 by 2% **[2 marks]**

$$100 + 2 = 102$$
$$102 \div 100 = 1.02$$
$$3650 \times 1.02$$

Answer __3723__

8 Decrease 77 by 12% **[2 marks]**

$$100 - 12 = 88$$
$$88 \div 100 = 0.88$$
$$77 \times 0.88 = 67.76$$

Answer __67.76__

9 Increase 97150 by 27% **[2 marks]**

$$100 + 27 = 127$$
$$127 \div 100 = 1.27$$
$$97150 \times 1.27 = 123380.5$$

Answer __123380.5__

15

Turn over ▶

10 In 2024 the population of a small town is 18200
Between 2024 and 2025 the population increased by 4%

Work out the population of the town in 2025. **[2 marks]**

$$18200 \times 1.04$$

Answer _____ 18928 _____

11 The normal price of a laptop is £460
The laptop is in a sale for 15% off.

Work out the price of the laptop in the sale. **[2 marks]**

$$460 \times 0.85$$

Answer £ _____ 391 _____

12 Ricky is paid £12.00 per hour.
He receives a 2.5% pay rise.

Work out Ricky's new hourly pay with the pay rise. **[2 marks]**

$$12 \times 1.025$$

Answer £ _____ 12.30 _____

13   The bill at a restaurant is £82.00
There is an additional charge of 2% if paying by credit card.

Work out the total bill if paying by credit card.   **[2 marks]**

$$82 \times 1.02$$

Answer £ _____ 83.64 _____

14   A regular box of cereal contains 120 grams.
A large box of cereal contains 30% extra.

Kelly buys 3 large boxes of cereal and 2 regular boxes.
Work out the total mass of all the boxes of cereal that Kelly buys.   **[4 marks]**

$$120 \times 1.3 = 156$$

$$3 \times 156 = 468$$
$$2 \times 120 = 240$$

$$468 + 240 = 708$$

Answer _____ 708 _____ grams

12

Turn over ▶

15 The prices for tickets to a theme park are shown below.

> Adult ticket: £40
> Child ticket: £25

Mr Woods buys 2 adult ticket and 3 child tickets.
He has a voucher that gives him 25% off.

Work out the total cost of the tickets when using the voucher. **[4 marks]**

$40 \times 2 = 80$ 155×0.75
$25 \times 3 = 75$ $= 116.25$
$80 + 75 = 155$

Answer £ _____ 116.25 _____

16 Luke receives 25% extra time for his exams.
One of Luke's exams lasts for 2 hours without the extra time.

Work out how long this exam is with the extra time.
Give your answer in hours and minutes. **[3 marks]**

$2 \times 60 = 120$ minutes
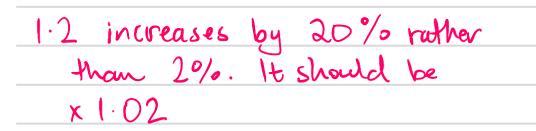$120 \times 1.25 = 150$ minutes

Answer ____ 2 ____ hours ____ 30 ____ minutes

17 On Monday the daytime temperature was 15.0 °C
On Tuesday the daytime temperature was 2% higher than on Monday.

Rayna works out the daytime temperature on Tuesday with the following method

15 × 1.2 = 18 °C

Explain the mistake that Rayna has made. **[1 mark]**

1·2 increases by 20% rather than 2%. It should be × 1·02

18 Jessie and James both train for long jump.

Compare to last year

Jessie increased her personal best jump by 12%
James increased his personal best jump by 10%

Who increased their personal best jump by a greater distance?
Tick **one** box

☐ Jessie   ☐ James   ☑ Not possible to tell

Give a reason for your answer. **[2 marks]**

We do not know their original personal bests.

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