Percentages: Linking concepts

Recap: Multipliers

Write these percentages as equivalent decimals and work out the answers

(a) 15% of 82kg
(b) 24% of 500g
(c) 3% of 480cm
(d) 0.2% of £7000

Percentage change (Increase / Decrease)

Write the appropriate multiplier and use it to solve the problem

(a) Increase £6 by 12%
(b) Decrease 68kg by 11%
(c) Increase 450mm by 9%
(d) Decrease 90ml by 38%

Using multipliers

$$New\ amount = Original\ amount \times Percentage\ change\ multiplier$$

$$Percentage\ change\ multiplier = \frac{New\ amount}{Original\ amount}$$

$$Original\ amount = \frac{New\ amount}{Percentage\ change\ multiplier}$$

Original amount

Reverse the calculation to find the original price.

(a) Sale price: £67.20, after 20% discount

(b) Value rose by 15% to £749.80

(c) Mass increased by 4% to 949.52g

(d) Runner was 11% slower on the second section, with a time of 72.98 seconds

(e) The crowd attendance of 6955 was 7% better than last week

(f) There was 28% less sugar in the new recipe – it now has 40.32g

Missing percentage

Find the multiplier and interpret it to find the percentage change to the nearest integer.

(a) 150m increased to 165m

(b) 604 litres decreased to 320 litres

(c) 92p increased to £1.18

(d) 510kg increased to 600kg

(e) 65 minutes decreased to 63.7 minutes

(f) 5.8 million increased to 6.2 million

(g) £35000 depreciated to £31500

(h) $965 increased to $1302.75