Percentage Change

ANSWERS

1

Increase £80 by 35%.

£80 (Original) → × 1.35 → £108 (New)

Multiplier: 100% + 35% = 135% = 1.35

New amount: £80 × 1.35 = £108

Answer £108

2

Decrease £240 by 15%.

£240 (Original) → × 0.85 → £204 (New)

Multiplier: 100% − 15% = 85% = 0.85

New amount: £240 × 0.85 = £204

Answer £204

3

A coat costs £86. In a sale, the price is reduced by 30%. Work out the sale price.

£86 (Original) → × 0.7 → £60.20 (New)

Multiplier: 100% − 30% = 70% = 0.7

New amount: £86 × 0.7 = £60.20

Answer £60.20

4

A rent of £315 a month goes up by 8%. Work out the new rent.

£315 (Original) → × 1.08 → £340.20 (New)

Multiplier: 100% + 8% = 108% = 1.08

New amount: £315 × 1.08

Answer £340.20

5

The price of a game goes up from £48 to £60. Work out the percentage increase.

£48 (Original) → + £12 → £60 (New)

Change: £60 − £48 = £12

÷ original: 12 ÷ 48 × 100 = 25%

Answer 25% increase

6

A bus fare goes down from £2.50 to £2.20. Work out the percentage decrease.

£2.50 (Original) → − £0.30 → £2.20 (New)

Change: £2.50 − £2.20 = £0.30

÷ original: 0.3 ÷ 2.5 × 100 = 12%

Answer 12% decrease

7

A concert ticket goes up from £40 to £50. Jamal works out 10 ÷ 50 × 100 = 20%.

Explain his mistake, then work out the right percentage increase.

he divided by the new amount

divide by the original, £40

10 ÷ 40 × 100

Answer 25%

8

Zara buys a phone case for £8 and sells it for £11. Work out her percentage profit.

profit = £11 − £8 = £3

3 ÷ 8 × 100

Answer 37.5%

Percentage Change *further practice*

ANSWERS

9

Increase £1250 by 4.5%.

100% + 4.5% = 104.5% = 1.045

£1250 × 1.045

Answer £1306.25

10

Write the multiplier for each change.
a) an increase of 9%
b) a decrease of 9%
c) an increase of 120%
d) a decrease of 2.5%

a) 1.09

b) 0.91

c) 2.2

d) 0.975

11

The number of people living in a village falls from 3200 to 2720. Work out the percentage decrease.

change = 3200 – 2720 = 480

480 ÷ 3200 × 100

Answer 15% decrease

12

A season ticket goes up from £395 to £425. Work out the percentage increase. Give your answer to 1 decimal place.

change = £30

30 ÷ 395 × 100 = 7.5949...

Answer 7.6%

13

The same jacket is on sale in two shops. Shop A: £64 with 15% off. Shop B: £58 with 5% off. Which shop is cheaper, and by how much?

A: £64 × 0.85 = £54.40

B: £58 × 0.95 = £55.10

Answer Shop A, by £0.70

14

A price of £50 goes up by 20%.
Then the new price goes down by 20%.
Ola says the price is back to £50.
Is she right? Show how you know.

£50 × 1.2 = £60

£60 × 0.8 = £48

Answer No, it is £48

15

Leah buys a bike for £340. A year later she sells it for £255. Work out her percentage loss.

loss = £340 – £255 = £85

85 ÷ 340 × 100

Answer 25%

16

Ben's pay goes up from £9.50 to £10.26 an hour. Ana's pay goes up from £11 to £11.77 an hour. Ana's pay went up by more money. Who had the bigger percentage increase?

Ben: 0.76 ÷ 9.50 × 100 = 8%

Ana: 0.77 ÷ 11 × 100 = 7%

Answer Ben