

Foundation GCSE: Percentage Increase & Decrease

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.

1. Increase £50 by 10%.
2. Decrease 80 kg by 20%.
3. Increase £120 by 25%.
4. Decrease 200 ml by 15%.
5. Increase 45 meters by 30%.
6. Find the multiplier for a 12% increase.
7. Find the multiplier for an 8% decrease.
8. Increase £340 by 5%.
9. Decrease 650g by 35%.
10. A jacket costs £80 before a 20% increase. What is the new price?
11. Increase £45.50 by 10%.
12. Decrease 120 by 17.5%.
13. What is the percentage change when a value increases from 40 to 50?
14. What is the percentage change when a value decreases from 80 to 60?
15. Increase £75 by 12.5%.
16. A car worth £12,000 depreciates in value by 15%. What is its new value?
17. Find the original price of a laptop if it costs £468 after a 20% discount.
18. Find the original price of an item if it costs £315 after a 12.5% increase.
19. A house increases in value from £150,000 to £186,000. Calculate the percentage profit.
20. An item is reduced by 20% in a sale. By what exact percentage must the sale price be increased to return to the original price?

Answers & Worked Solutions

1. £55
 $10\% \text{ of } 50 = 5, 50 + 5 = 55.$
2. 64 kg
 $20\% \text{ of } 80 = 16, 80 - 16 = 64.$
3. £150
 $25\% \text{ of } 120 = 30, 120 + 30 = 150.$
4. 170 ml
 $15\% \text{ of } 200 = 30, 200 - 30 = 170.$
5. 58.5 m
 $30\% \text{ of } 45 = 13.5, 45 + 13.5 = 58.5.$
6. 1.12
 $1 + 0.12 = 1.12.$
7. 0.92
 $1 - 0.08 = 0.92.$
8. £357
 $340 \times 1.05 = 357.$
9. 422.5 g
 $650 \times 0.65 = 422.5.$
10. £96
 $80 \times 1.20 = 96.$
11. £50.05
 $45.50 \times 1.10 = 50.05.$
12. 99
 $120 \times 0.825 = 99.$
13. 25%
 $\frac{10}{40} \times 100 = 25\%.$
14. 25%
 $\frac{20}{80} \times 100 = 25\%.$
15. £84.38
 $75 \times 1.125 = 84.375 \text{ (round to } £84.38).$
16. £10,200
 $12000 \times 0.85 = 10200.$
17. £585
 $468 \div 0.80 = 585.$
18. £280
 $315 \div 1.125 = 280.$
19. 24%
 $\frac{36000}{150000} \times 100 = 24\%.$
20. 25%
Let original be 100, sale price is 80. $\frac{20}{80} \times 100 = 25\%.$