Reverse Percentage

Core Worksheet

Worked Examples & Guided Practice

I Do (Teacher Model) In a sale, a coat is reduced by 20% to £68. Calculate the original price of the coat.

We Do (Guided Practice) The price of a house increased by 15% to £230,000. Calculate the price before the increase.

You Do (Independent Practice) A car loses 35% of its value after one year and is now worth £11,700. Calculate its original price when new.

Challenge (Extension) After adding 20% VAT, the price of a laptop is £504. A shop offers a 10% discount on the pre-VAT price. Calculate the price of the laptop after the discount but before VAT.

Practice Perfect Questions

Q1. A shirt is reduced by 10% in a sale to £36. Find its original price.

Q2. The population of a town increased by 8% to 37,800. Find the original population.

Q3. A television is sold for £432 after a 28% discount. Calculate the normal price.

Q4. An investment increases in value by 12% and is now worth £6720. Calculate the original investment.

Q5. The weight of a cereal box decreases by 15% to 680 g. Calculate the original weight.

Q6. Including 20% VAT, a sofa costs £780. Calculate the VAT amount included in the price.

Answers & Worked Solutions

Model Solutions

- **I Do:** $80\% = 68 \implies 1\% = 0.85 \implies 100\% = £85$
- **We Do:** $115\% = 230000 \implies 1\% = 2000 \implies 100\% = £200,000$
- **You Do:** $65\% = 11700 \implies 1\% = 180 \implies 100\% = £18,000$
- **Challenge:** Pre-VAT $= \frac{504}{1.20} = £420$. Discounted $= 420 \times 0.90 = £378$

Practice Perfect Questions Solutions

Q1. $90\% = 36 \implies 100\% = £40$

Q2. $108\% = 37800 \implies 100\% = 35,000$

Q3. $72\% = 432 \implies 100\% = £600$

Q4. $112\% = 6720 \implies 100\% = £6000$

Q5. $85\% = 680 \implies 100\% = 800$ g

Q6. Pre-VAT $= \frac{780}{1.20} = £650 \implies$ VAT $= 780 - 650 = £130$