Percentage comparisons

6 questions | 14 marks

Equivalent correct methods earn the corresponding marks.

1. Write 18 out of 60 as a percentage. [2 marks]

$18 \div 60 \times 100\% = 30\%$.

Answer: 30%

2. Compare 14 out of 20 with 18 out of 30. Which rate is higher? [2 marks]

$14 \div 20 = 0.7$.

$18 \div 30 = 0.6$.

Answer: 14 out of 20: 70%, compared with 60%.

3. A rate rises from 40% to 50%. Find the difference in percentage points. [2 marks]

$50 - 40 = 10$ percentage points.

Answer: 10 percentage points

4. For the rise from 40% to 50%, find the relative percentage increase. [2 marks]

The change is 10 percentage points.

$10 \div 40 \times 100\% = 25\%$.

Answer: 25%

5. Shop A takes 15% off a 200 AUD item. Shop B takes 20% off an 80 AUD item. Which discount saves more dollars? [3 marks]

Shop A: $0.15 \times 200 = 30$.

Shop B: $0.20 \times 80 = 16$.

Shop B has the larger percentage, but Shop A saves more dollars.

Answer: Shop A saves 30 AUD; Shop B saves 16 AUD.

6. A class of 25 has 20 completed projects; another class of 40 has 30. Compare completion rates. Give one reason the rates alone cannot prove which class worked harder. [3 marks]

$20 \div 25 \times 100\% = 80\%$.

$30 \div 40 \times 100\% = 75\%$.

Rates compare completed shares, not effort directly.

Answer: 80% and 75%; the first rate is higher, but task difficulty, time or support may differ.