Percentages: Lesson Slides & Worksheet

Ages 11–14 · Maths

Name _____ Class _____ Date _____

A Key terms: match each term to its meaning

Write the letter of the correct meaning in the box next to each term.

1 **Percentage**	☐	**A** The plain difference between two percentages; 40% to 50% is a rise of 10 percentage points.
2 **Multiplier**	☐	**B** A number of parts out of 100; 37% means 37 out of every 100.
3 **Percentage change**	☐	**C** A problem where you know the value after a percentage change and must find the original value.
4 **Original value**	☐	**D** The decimal you multiply by to change an amount in one step; 1.15 for a 15% increase, 0.75 for a 25% decrease.
5 **Reverse percentage**	☐	**E** The value before an increase or decrease; percentages of change are always worked out from it.
6 **Percentage point**	☐	**F** The change in a value as a percentage of its original value: change ÷ original × 100.

B Quick quiz

Circle the best answer, write its letter, then explain your choice in a few words.

1 **What is 3/5 written as a percentage?**

a) 35% **b)** 60%
c) 53% **d)** 0.6%

Answer: _____ Why? _____

2 **What is 15% of USD 260?**

a) USD 39 **b)** USD 26
c) USD 15 **d)** USD 221

Answer: _____ Why? _____

3 **A town's population rises from 8,000 to 9,000. What is the percentage increase?**

a) 1,000% **b)** 11.1%
c) 12.5% **d)** 125%

Answer: _____ Why? _____

4 **After a 30% reduction, a coat costs GBP 84. What was the original price?**

a) GBP 109.20 **b)** GBP 120
c) GBP 114 **d)** GBP 58.80

Answer: _____ Why? _____

5 **Which multiplier decreases an amount by 8%?**

a) 0.8 **b)** 1.08
c) 0.92 **d)** 0.08

Answer: _____ Why? _____

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Answer key for teachers · Ages 11–14 · Maths

A Key terms

1	**Percentage**	B	A number of parts out of 100; 37% means 37 out of every 100.
2	**Multiplier**	D	The decimal you multiply by to change an amount in one step; 1.15 for a 15% increase, 0.75 for a 25% decrease.
3	**Percentage change**	F	The change in a value as a percentage of its original value: change ÷ original × 100.
4	**Original value**	E	The value before an increase or decrease; percentages of change are always worked out from it.
5	**Reverse percentage**	C	A problem where you know the value after a percentage change and must find the original value.
6	**Percentage point**	A	The plain difference between two percentages; 40% to 50% is a rise of 10 percentage points.

B Quick quiz

1 b) 60%

3 ÷ 5 = 0.6, and 0.6 × 100 = 60%. You could also scale the fraction: 3/5 = 60/100 = 60%.

2 a) USD 39

10% of 260 is 26 and 5% is 13, so 15% is 26 + 13 = 39. With a calculator: 0.15 × 260 = 39. USD 221 is the price after a 15% decrease.

3 c) 12.5%

The change is 1,000. Divide by the original value: 1,000 ÷ 8,000 × 100 = 12.5%. Dividing by the new value, 9,000, gives the wrong answer of 11.1%.

4 b) GBP 120

GBP 84 is 70% of the original, so the original is 84 ÷ 0.7 = GBP 120. Check: 120 × 0.7 = 84. Adding 30% to 84 gives GBP 109.20, which is wrong.

5 c) 0.92

A decrease of 8% leaves 100% − 8% = 92% of the amount, so the multiplier is 0.92. Multiplying by 0.08 finds only the 8%, and 1.08 is an 8% increase.