

Percentages of Numbers 2

'Percent' or '%' means 'out of every hundred'. When trying to determine the **percentage** one number represents of another, first look at the **larger** of the two. This should become the **denominator**. The **smaller** of the two should be the **numerator**.

For example: a score of 14 out of 20 on a test should be written as: $\frac{14}{20}$

This now needs to be converted to a **percentage** by turning it into a **fraction** with **100ths** as the **denominator**.

$$\text{So } \frac{14}{20} \times \frac{5}{5} = \frac{70}{100} = 70\%$$

If the **denominator** is not a **factor** of **100**, then **two calculations** may be necessary. For example:

$\frac{16}{40}$ First divide both numbers by 4 then multiply them by 10 to make a fraction with 100ths as the denominator.

$$\text{So } \frac{16}{40} \div \frac{4}{4} = \frac{4}{10} \times \frac{10}{10} = \frac{40}{100}$$

So the answer would be 40%. Now try these using the same method.

1. 18 out of 30 = _____

2. 12 out of 30 = _____

3. 48 out of 80 = _____

4. 49 out of 70 = _____

5. 18 out of 60 = _____

6. 6 out of 15 = _____

7. 16 out of 80 = _____

ANSWERS

1. $\frac{18}{30} \div 3 \times 10 = 60\%$
2. $\frac{12}{30} \div 3 \times 10 = 40\%$
3. $\frac{48}{80} \div 8 \times 10 = 60\%$
4. $\frac{49}{70} \div 7 \times 10 = 70\%$
5. $\frac{18}{60} \div 6 \times 10 = 30\%$
6. $\frac{6}{15} \div 3 \times 20 = 40\%$
7. $\frac{16}{80} \div 8 \times 10 = 20\%$