

Learning Objective 1: To be able to compare proportions of amounts to solve problems

Without using a calculator, write the following as percentages

20 out of 50	7 out of 70	45 out of 50	24 out of 80
16 out of 40	36 out of 60	11 out of 55	2 out of 5

Using a calculator, write the following as percentages

45,000 people have brown hair out of a total population of 180,000	Tim scored 17 out of 33
64,000 people voted out of a total of 71,825	3.2×10^4 atoms were lost out of a total of 1.8×10^{11}

Solve the following word problems, without using a calculator

Simon scored 21 out of 70 and Peter got 23%. Who performed best?
An exam has two sections. Section A is out of 50 and section B is out of 30. For the entire exam, Sally scored 75%. Jack got 80% in section A. What score would he have to achieve in section B to beat Sally's score?

Jack has a recipe to make a chocolate cake, however he has far too many ingredients.

Use a calculator to complete this table

Total amount of ingredients in kitchen	Percentage of total amount needed	Amount used
2kg of flour		750g
20 eggs	10%	
5 litres of water		400ml
750g of sugar		$\frac{1}{4}$ of a kg
5 bars of chocolate each containing 16 segments		34 segments
600ml of double cream	32%	