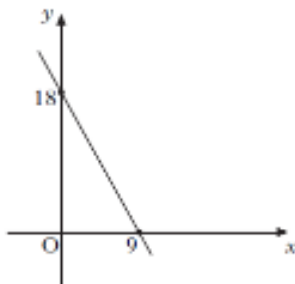# Practice Exam 2

1. A local council recycles 42 000 tonnes of waste a year.
   The council aims to increase the amount of waste recycled by 8% each year.
   How much waste does it expect to recycle in 3 years time?
   Give your answer **to three significant figures**.

   4 marks

2. A straight line cuts the *x*-axis at the point (9, 0) and the *y*-axis at the point (0, 18) as shown.

   Find the equation of this line.

   3 marks

3. The heights, in centimetres, of seven netball players are given below.

   173   176   168   166   170   180   171

   For this sample, calculate:
   (*a*) the mean;   1 mark
   (*b*) the standard deviation.   3 marks
   Show clearly all your working.

4. Jamie works as a potter for a company which makes china ornaments.
   He earns a basic salary of £218 per week plus 80 pence for every ornament he makes.
   Jamie saves $\frac{2}{5}$ of his gross pay every week.
   One week he makes 40 ornaments.
   Calculate how much Jamie saves that week.

   3 marks

5. The table shown below is used to calculate loan repayments.

		60 months	48 months	24 months
		Monthly repayment (£)	Monthly repayment (£)	Monthly repayment (£)
With payment protection	£20 000	463·85	551·43	994·23
	£15 000	347·89	413·57	745·67
	£7500	173·94	206·79	372·84
Without payment protection	£20 000	384·65	467·72	884·47
	£15 000	288·49	350·79	663·35
	£7500	144·24	175·40	331·68

Samir wishes to borrow £15 000.
How much will the loan cost him if he repays it over 48 months, with payment protection?

3 marks

6. Anna earns £42 000 per year. She has tax allowances of £5425.
The rates of tax applicable for the year are given in the table below.

Taxable income (£)	Rate
On the first £34 600	20%
On any income over £34 600	40%

How much is Anna's **monthly** tax bill?

5 marks

7. A cylindrical container has a volume of 3260 cubic centimetres.
The radius of the cross section is 6·4 centimetres.
Calculate the height of the cylinder.

3 marks