If a question has more than 1 mark, show some working out for full marks

Name:_	 
Due:	 /14

## 1. Prime Factors (2)

Write 2009 as a product of its prime factors.

#### 2. Ratio/Rates (1)

An acceptable amount of water pollution is less than 1000 bacteria per 100mL of water. Which one of the following levels is acceptable?

- 500 bacteria per 40 ml of water
- 900 bacteria per 80 ml of water
- 1500 bacteria per 160 ml of water
- 2000 bacteria per 180 ml of water

### 3. Number (2)

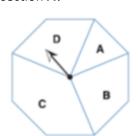
A prize of \$5934 is to be shared between 15 people.

How much does each person get?

Show the calculation you did on your calculator.

### 4. Probability (1)

A spinner is made of a regular octagon and an arrow. After 160 spins, what is the expected number of times the arrow will point to section **A**?



#### 5. Statistics (3) - show your working for the mean and median

This list shows the number of films nine friends watched last month.

Number of films watched

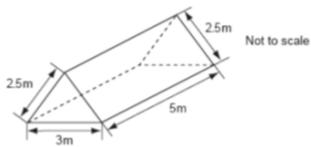
0, 1, 2, 2, 3, 4, 5, 5, 5

Which of the following is true for this data?

- mean > median = mode
- mean < median < mode</p>
- mean = median = mode
- mean = median < mode</p>

#### 6. Area (2)

This solid triangular prism needs all its faces painted. The triangular faces have an area of 3 m<sup>2</sup>.



What is the total area to be painted? Show your working to find the area of the other three faces.

### 7. Order of Operation (1)

What is the best estimate of

 $16 \times 34 + 68 - 91$ 



$$\bigcirc$$
 10 × 30 + 70 - 90

$$\bigcirc$$
 20 × 30 + 70 - 90

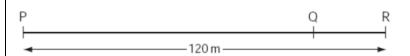
$$\bigcirc$$
 20 × 40 + 70 - 100

# 8. Substitution (1)

If 
$$y = 6 - 4x$$

then what is the value of y if x = 3.75

### 9. Reading Scales (1)



The distance form P to Q is four times the distance from Q to R.

What is the distance from Q to R?