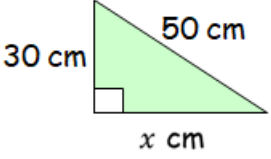


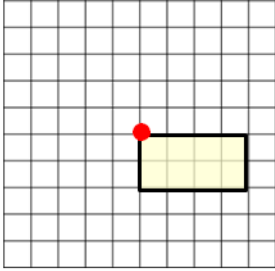













Name:	Date:
<p><b>1</b> Calculate the length of the side marked <math>x</math> in the triangle below.</p> 	<p> MTH 416a Bronze Outcome 1</p> 
<p><b>2</b> Complete the shape opposite so that it has rotational symmetry of order 2 around the dot.</p> 	<p> MTH 419a Silver Outcome 1</p>
<p><b>3</b> In an office there are 18 men and 42 women.</p> <p>What percentage of the office staff are female?</p> 	<p> MNU 407a Silver Outcome 3</p> 
<p><b>4</b> Nicky bought 12 raffle tickets from a book with 110 tickets.</p> <p>Simon bought 25 raffle tickets from a book with 300 tickets.</p> <p>Who is more likely to win?</p> <p>You <b>MUST</b> give a reason for your answer!</p> 	<p> MNU 422a Gold Outcome 1</p> 
<p><b>5</b> A band share royalties from a hit record. The money was shared between Paul : John : George : Ringo in the ratio of 5 : 6 : 2 : 1.</p> <p>If Paul received £20 000, how much did John earn?</p> 	<p> MNU 408a Gold Outcome 2</p>
My score:	



# Exam Questions

Question 1:

Solve algebraically the inequality

$$9m - 2 > 70.$$

2



MTH 415a Bronze Outcome 2

Question 2:

Factorise

$$15 + 6x.$$

2



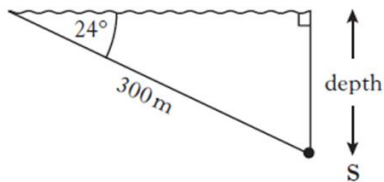
MTH 414b Bronze Outcome 1

Question 3:

A submarine, S, dives for 300 metres at an angle of  $24^\circ$  to the surface.

Calculate the depth of the submarine as shown in the diagram.

Do not use a scale drawing.



3



MTH 416a Bronze Outcome 2



Question 4:

An old unit of measurement called a fluid ounce is equal to 0.0296 litres.

Write 0.0296 in scientific notation.

2



MTH 406b Gold Outcome 3

Question 5:

Mhairi makes necklaces in M-shapes using silver bars.



(a) Complete the table below.

2

Number of M-shapes ( $m$ )	1	2	3	4		15
Number of bars ( $b$ )	4	7				

(b) Write down a formula for calculating the number of bars ( $b$ ) when you know the number of M-shapes ( $m$ ).

2

(c) Mhairi has 76 silver bars.

How many M-shapes can she make?

2



MTH 413a Bronze Outcome 1

My score: