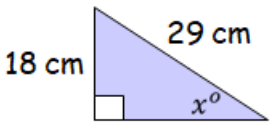
Name:	Date:
1 Decrease 500 centimetres by 40%. 	MNU 407a Bronze Outcome 2
2 Construct an ordered stem and leaf diagram for the information below.  **Exercise bike times (in minutes)** 42 24 31 29 12 37 28 31 47 33 34 23 15 3	MTH 421a Silver Outcome 1
3 It takes 4 firemen 40 minutes to extinguish a blaze. How long would it take 10 firemen at the same rate? 	MNU 408a Silver Outcome 1
4 How long would it take Lisa to cycle 16·8 kilometres if she maintained an average speed of 12 kilometres per hour? 	MNU 410a Silver Outcome 4 
5 Calculate the size of the angle marked x in the triangle below. 	MTH 416a Silver Outcome 2 
My score:	

Exam Questions

Question 1:

MTH 414a Silver Outcome 1

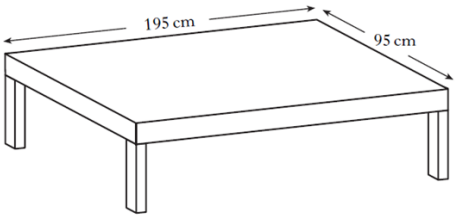
Multiply out the brackets and simplify

$6(2n - 3) + 11.$ **2**

Question 2:

MTH 416a Bronze Outcome 1

Phil is making a wooden bed frame.
The frame is rectangular and measures 195 centimetres by 95 centimetres.

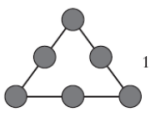


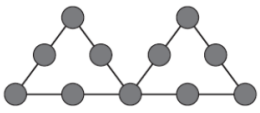
To make the frame rigid, Phil is going to add a piece of wood along one of its diagonals.
He has a piece of wood 2·2 metres long.
Is this piece of wood long enough to fit along the diagonal?
Give a reason for your answer.
Do not use a scale drawing. **4**

Question 3:

MTH 413a Bronze Outcome 1

An amusement arcade has a lighting effect in the shape of triangles with coloured lights attached.
The lighting effect can be assembled in sections as shown below.


1 section


2 sections

(*a*) Complete the table below. **2**

Number of sections (s)	1	2	3	4	5		12
Number of coloured lights (c)	6	11					

(*b*) Write down a formula for calculating the number of coloured lights (c) when you know the number of sections (s). **2**

(*c*) The amusement arcade's lighting effect uses a total of 116 coloured lights.
How many sections are in the lighting effect? **2**

Question 4:

MTH 415a Bronze Outcome 1

Solve algebraically the inequality

$3t + 4 > 28.$ **2**

Question 5:

MTH 414b Bronze Outcome 1

Factorise $15a + 12.$ **2**

My score: