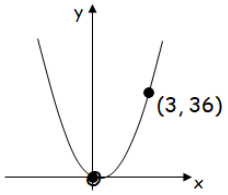
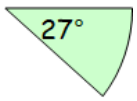
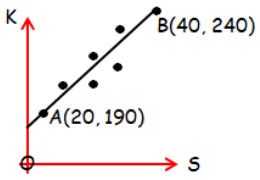
Name:	Date:
Question 1: The diagram shows the parabola with an equation in the form $y = kx^2$.  What is the value of k?	REL 1·2 Gold Outcome 1
Question 2: Change the subject of the formula to w. $$A = \frac{w^2 r}{p}$$	REL 1·1e Silver Outcome 2
Question 3: Evaluate; $$4\frac{3}{7} + 1\frac{1}{10}$$	APP 1·3b Gold Outcome 1
Question 4: The area of this sector is 5·89 cm².  What is the length of the radius?	E+F 1·4b Gold Outcome 2
Question 5: Calculate the equation of the line of best fit for the following scatter graph.  Give the equation in it's simplest form.	APP 1·4 Silver Outcome 3
My score:	

Exam Questions

Question 1:

E+F 1·2a Gold Outcome 2

Multiply out the brackets and collect like terms.

$(3x + 2)(x - 5) + 8x$ **3**

Question 2:

You're on your own!

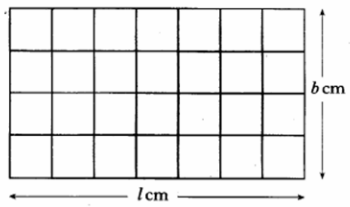
A company buys machinery worth £750 000.
The value of the machinery depreciates by 20% per annum.
The machinery will be replaced at the end of the year in which its value falls below half of its original value.

After how many years should the machinery be replaced?
You must explain your answer. **4**

Question 3:

REL 1·1d Gold Outcome 1

A rectangular window has length, l centimetres and breadth, b centimetres.



A security grid is made to fit this window.
The grid has 5 horizontal wires and 8 vertical wires.

(a) The perimeter of the window is 260 centimetres.
Use this information to write down an equation involving l and b. **1**

(b) In total, 770 centimetres of wire are used.
Write down another equation involving l and b. **2**

(c) Find the length and breadth of the window. **3**

Question 4:

E+F 1·2a Bronze Outcome 1

(a) (i) Factorise completely $3y^2 - 6y$. **1**

(ii) Factorise $y^2 + y - 6$. **2**

(b) Hence express $\frac{3y^2 - 6y}{y^2 + y - 6}$ in its simplest form. **2**

Question 5:

REL 1·5b Bronze Outcome 1

Solve the following equation for $0 \leq x \leq 360$.

$7 \sin x^\circ - 3 = 0$ **3**

My score: