Name:	Date:
Question 1:  The population of a town is 20 000. It is expected to increase by 5% p.a. What is the population expected to be after 3 years? 	APP 1·3a Bronze Outcome 2
Question 2: Factorise the following expression; $m^2 + 4m - 60$	E+F 1·2b Silver Outcome 3
Question 3: Change the subject of the formula to Z. $Y = \frac{n}{z^2}$	REL 1·1e Gold Outcome 1
Question 4: Express this fraction in it's simplest form. $\frac{8x - 24}{x^2 - 9}$	E+F 1·3 Gold Outcome 1
Question 5: Express $x^2 - 4x + 12$ in the form $(x + p)^2 + q$.	E+F 1·2c Bronze Outcome 1
My score:	

Exam Questions

Question 1:

E+F 1·2a Silver Outcome 3

Multiply out the brackets and collect like terms.

$(x+3)(x^2+4x-12)$ **3**

Question 2:

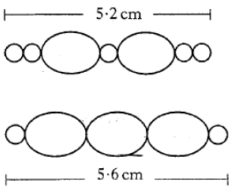
APP 1·3b Gold Outcome 3

Evaluate $\frac{1}{2} \div 2\frac{2}{3}$. 2

Question 3:

REL 1·1d Gold Outcome 1

A jeweller uses two different arrangements of beads and pearls.



The first arrangement consists of 2 beads and 5 pearls and has an overall length of 5·2 centimetres.

The second arrangement consists of 3 beads and 2 pearls and has an overall length of 5·6 centimetres.

Find the length of **one** bead and the length of **one** pearl. **6**

Question 4:

E+F 1·4c Silver Outcome 2
E+F 1·4c Silver Outcome 3

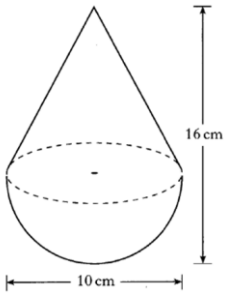
A child's toy is in the shape of a hemisphere with a cone on top, as shown in the diagram.

The toy is 10 centimetres wide and 16 centimetres high.

Calculate the volume of the toy.

Give your answer correct to 2 significant figures.

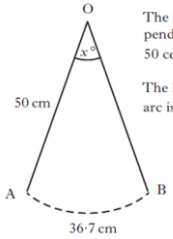
5



Question 5:

E+F 1·4b Gold Outcome 1

As the pendulum of a clock swings, its tip moves through an arc of a circle.



The length of the pendulum is 50 centimetres.

The length of the arc is 36·7 centimetres.

Calculate $x°$, the angle through which the pendulum swings. **3**

My score: