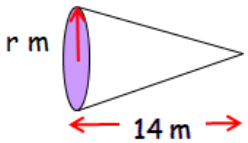
Name:	Date:
Question 1: Change the subject of the formula to s. $$e = a\sqrt{s} - v$$	REL 1·1e Silver Outcome 2
Question 2: Express $x^2 + 8x + 10$ in the form $(x + a)^2 + b$.	E+F 1·2c Bronze Outcome 1
Question 3: This cone has a volume of 527·52 m³.   Calculate it's radius.	E+F 1·4c Gold Outcome 2
Question 4: Calculate the semi-interquartile range for the following data set. 28, 22, 26, 19, 27, 29, 18, 30, 25, 21	APP 1·4 Silver Outcome 1
Question 5: Solve the following inequality; $$\frac{2x+1}{2} + \frac{x-5}{3} \leq 1$$	REL 1·1c Gold Outcome 2
My score:	

Exam Questions

Question 1:

REL 1·4b Silver Outcome 1

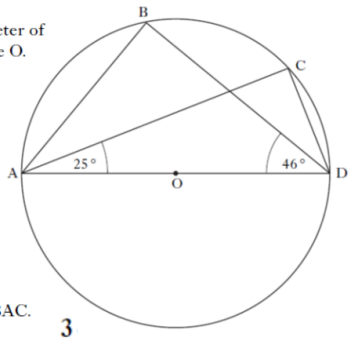
AD is a diameter of a circle, centre O.

B and C are points on the circumference of the circle.

Angle CAD = 25°.

Angle BDA = 46°.

Calculate the size of angle BAC.



3

Question 2:

You're on your own!

Jack weighs 94 kilograms.

On the 1st of January, he starts a diet which is designed to reduce his weight by 7% per month.

During which month should he achieve his target weight of 73 kilograms?

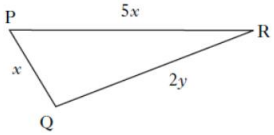
Show all your working. 4

Question 3:

REL 1·1d Gold Outcome 1

In triangle PQR:

- PQ = x centimetres
- PR = $5x$ centimetres
- QR = $2y$ centimetres.



(*a*) The perimeter of the triangle is 42 centimetres.

Write down an equation in x and y to illustrate this information. 2

(*b*) PR is 2 centimetres longer than QR.

Write down another equation in x and y to illustrate this information. 2

(*c*) Hence calculate the values of x and y. 3

Question 4:

E+F 1·1a Silver Outcome 1

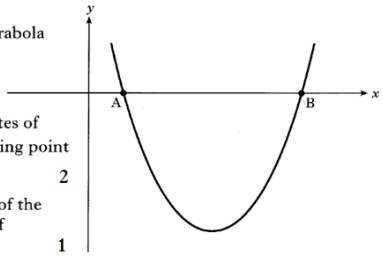
Express $\sqrt{45} - 2\sqrt{5}$ as a surd in its simplest form. 2

Question 5:

REL 1·2 Bronze Outcome 3

The equation of the parabola in the diagram is

$y = (x-3)^2 - 4$.



(*a*) State the coordinates of the minimum turning point of the parabola. 2

(*b*) State the equation of the axis of symmetry of the parabola. 1

(*c*) A is the point (1, 0). State the coordinates of B. 1

My score: