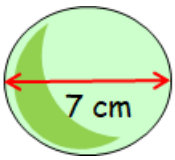
Name:	Date:
Question 1: Multiply out the following brackets and collect like terms; $(x-5)(x^2+2x+6)$	E+F 1·2a Silver Outcome 3
Question 2: Calculate the volume of this sphere which has a diameter of 7 centimetres  	E+F 1·4c Silver Outcome 3
Question 3: Solve the following equation; $\frac{x}{3}+\frac{x}{2}=7$	REL 1·1c Gold Outcome 1
Question 4: Calculate the discriminant and determine the nature of the roots for the following quadratic equation. $9x^2+6x+1=0$	REL 1·3b Bronze Outcome 1
Question 5: Solve **algebraically** the system of equations; $3x+2y=10$ $2x-3y=11$	REL 1·1d Gold Outcome 1
My score:	

Exam Questions

Question 1:

APP 1·3a Bronze Outcome 2

There are 2·69 million vehicles in Scotland.

It is estimated that this number will increase at a rate of 4% each year.

If this estimate is correct, how many vehicles will there be in 3 years' time?

Give your answer **correct to 3 significant figures.** 4

Question 2:

E+F 1·1a Silver Outcome 1

Express

$$2\sqrt{5}+\sqrt{20}-\sqrt{45}$$

as a surd in its simplest form. **3**

Question 3:

E+F 1·1b Bronze Outcome 1

E+F 1·1b Silver Outcome 2

Simplify the expression below, giving your answer with a positive power.

$$m^5 \times m^{-8}$$ **2**

Question 4:

APP 1·4 Bronze Outcome 2

(*a*) Show that the standard deviation of 1, 1, 1, 2 and 5 is equal to $\sqrt{3}$. **3**

(*b*) **Write down** the standard deviation of 101, 101, 101, 102 and 105. **1**

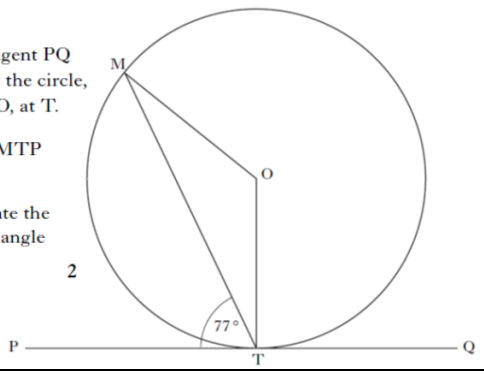
Question 5:

E+F 1·2a Bronze Outcome 1

The tangent PQ touches the circle, centre O, at T.

Angle MTP is 77°.

Calculate the size of angle MOT. **2**



My score: