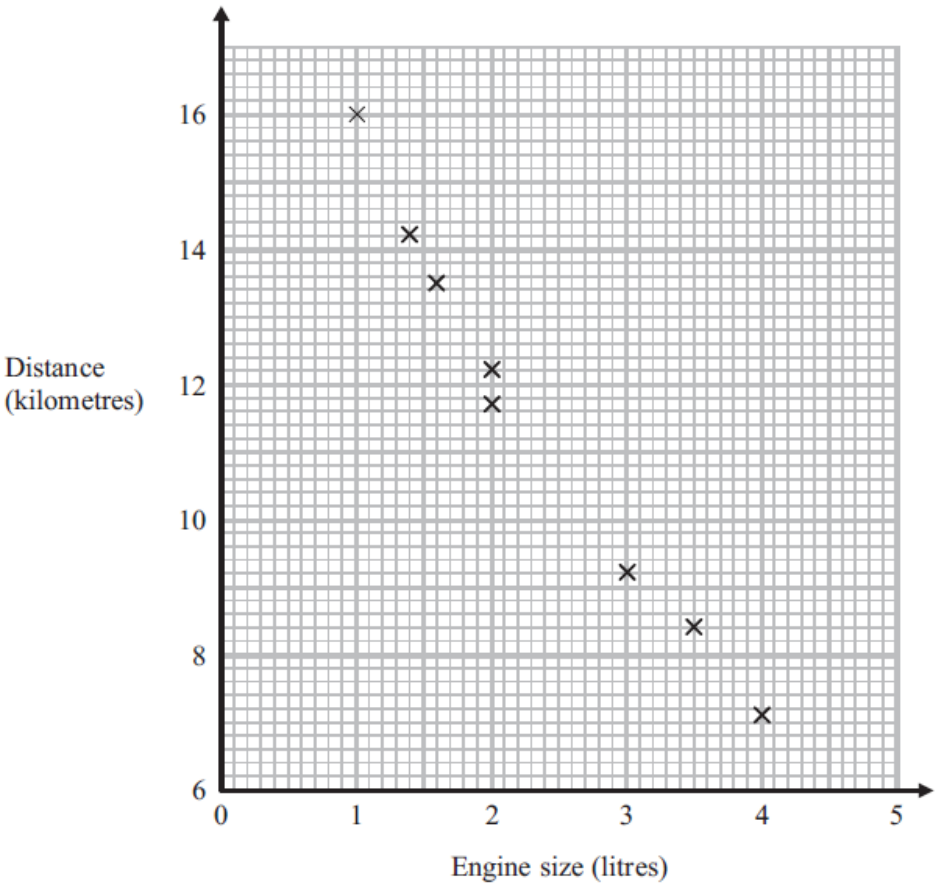
Full Name: …….. **Date: 09 March 2026**

Test

1.

The scatter graph shows some information about 8 cars.
For each car it shows the engine size, in litres, and the distance, in kilometres, the car travels on one litre of petrol.



(a) What type of correlation does the scatter graph show?

.....

(1)

A different car of the same type has an engine size of 2.5 litres.

(b) Estimate the distance travelled on one litre of petrol by this car.

..... kilometres

(2)

2.

(a) Express 72 and 60 as the product of their prime factors.

72 = …….

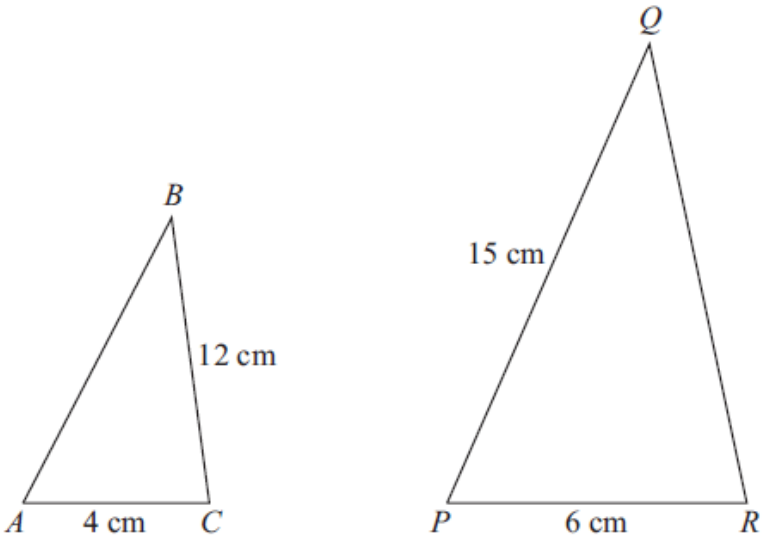
60 = …….

(4 marks)

(b) Machine A is set to ring an alarm every 72 minutes. Machine B is set to ring an alarm every 60 minutes. Both machines ring their alarms together at 9:15 am. What is the next earliest time the machines will ring their alarms together again?

(2 marks)

3.



Diagrams **NOT** accurately drawn

Triangles ABC and PQR are mathematically similar.

Angle A = angle P.
Angle B = angle Q.
Angle C = angle R.
AC = 4 cm.
BC = 12 cm.
PR = 6 cm.
PQ = 15 cm.

(a) Work out the length of QR.

..... cm
(2)

(b) Work out the length of AB.

..... cm
(2)

4.

The diagram shows two similar solids, A and B.

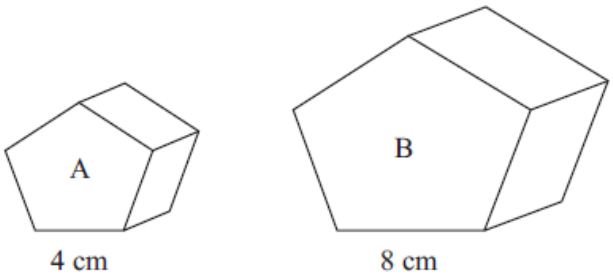


Diagram **NOT** accurately drawn

Solid A has a volume of 80 cm^3.

(a) Work out the volume of solid B.

.....cm^3

(2)

Solid B has a total surface area of 160 cm^2.

(b) Work out the total surface area of solid A.

.....cm^2

(2)

5.

The diagram shows a trapezium.

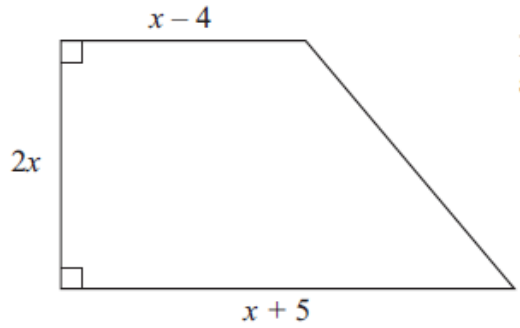


Diagram **NOT** accurately drawn

All the measurements are in centimetres.

The area of the trapezium is 351 cm^2.

(a) Show that $2x^2 + x - 351 = 0$

(2)

(b) Work out the value of x.

(3)

- End of Test -