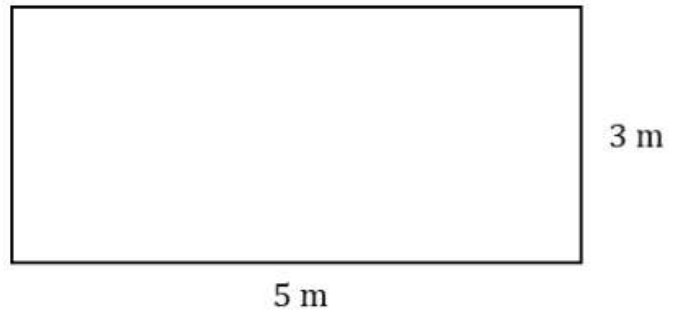


Shapes Exam Questions

Question 1

The diagram below shows Derek's garden.

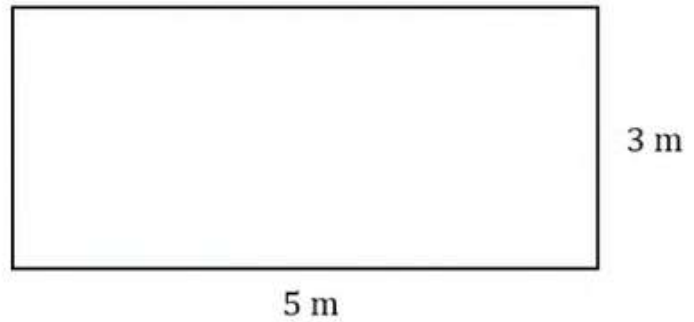


Find the area of the garden.

Shapes Exam Questions

Question 2

Derek's garden is pictured again below.



Derek wants to run 1 mile around the garden in 20 minutes.

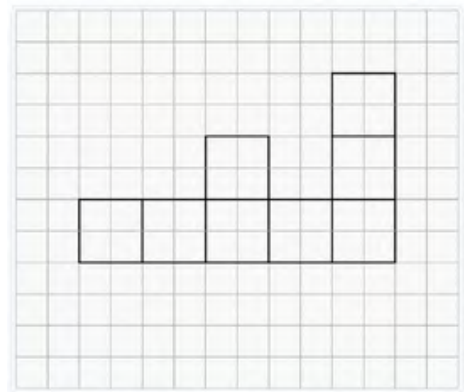
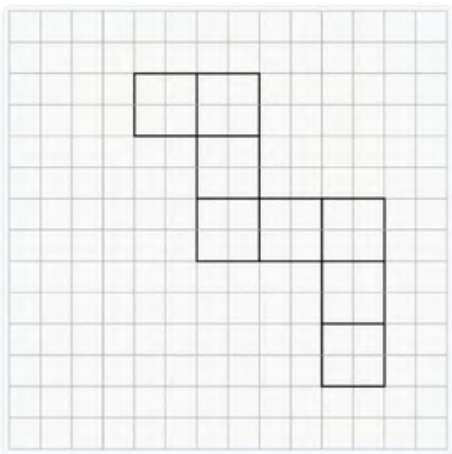
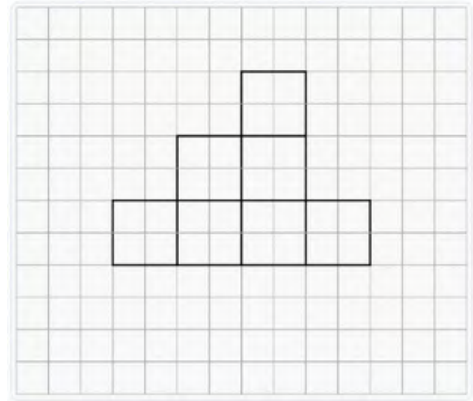
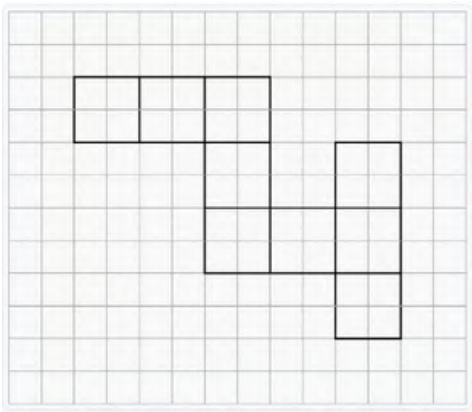
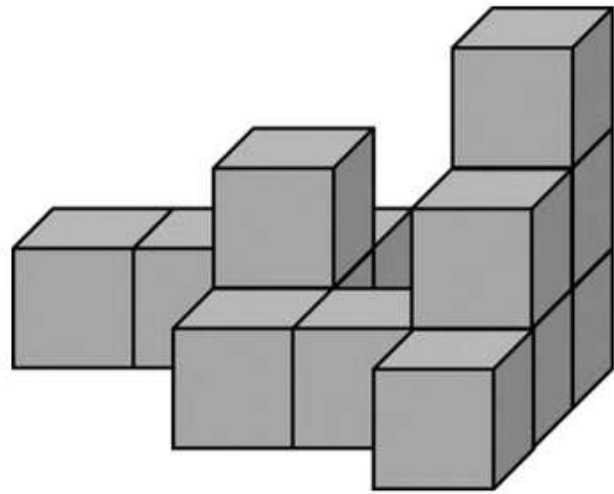
How many seconds should he take per lap?

1 mile = 1.6 km

Shapes Exam Questions

Question 3

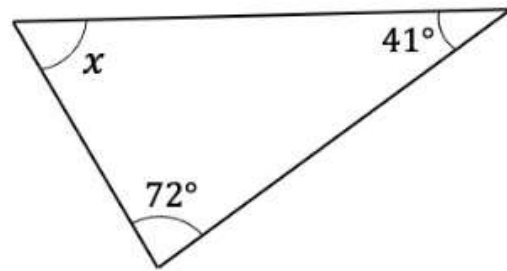
Select the correct plan view of the shape shown below.



Shapes Exam Questions

Question 4

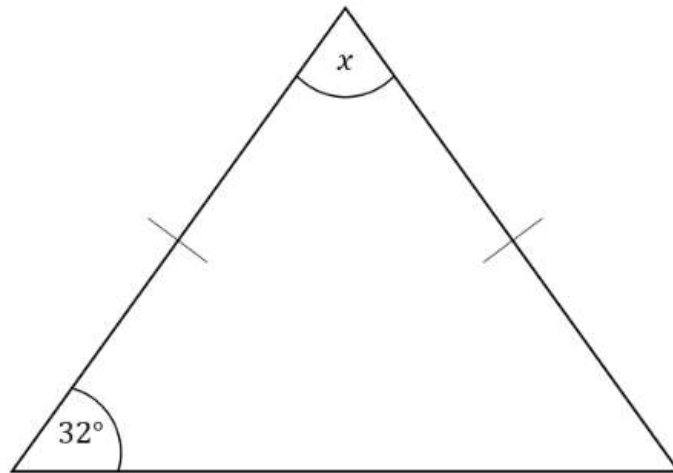
Find the missing angle labelled x .



Shapes Exam Questions

Question 5

Find the angle marked x in the isosceles triangle below.

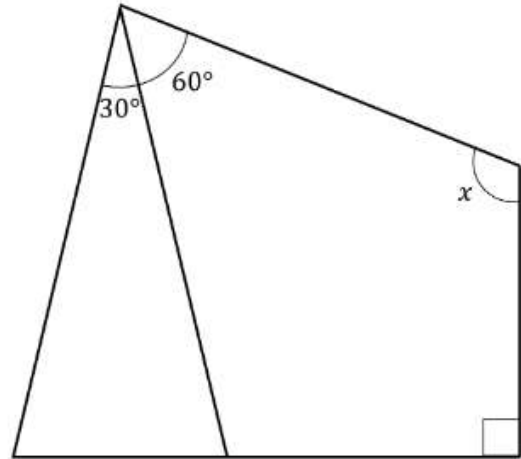


Shapes Exam Questions

Question 6

The diagram below consists of an isosceles triangle connected to a quadrilateral.

Find the angle x .

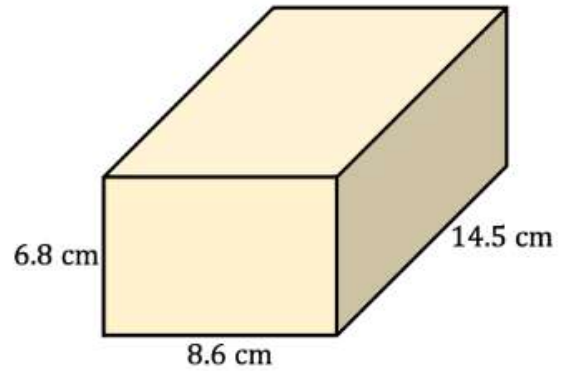


Shapes Exam Questions

Question 7

Lucy has bought a block of gold, which is shown below.

She weighs the block of gold to be 16.38 kg.



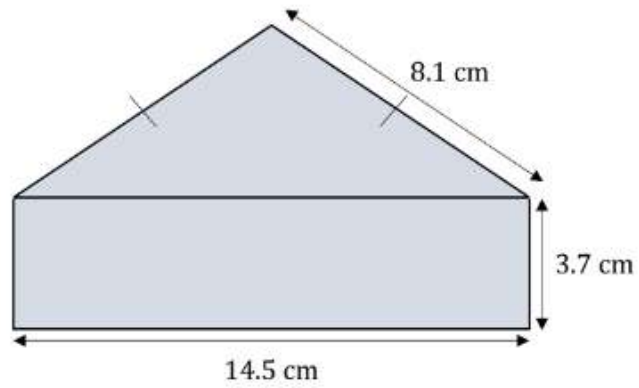
Calculate the density of the block of gold in g/cm^3 .

Give your answer to 2 decimal places.

Shapes Exam Questions

Question 8

The shape below is made using an isosceles triangle and a rectangle.



Calculate the perimeter of the shape.

Shapes Exam Questions

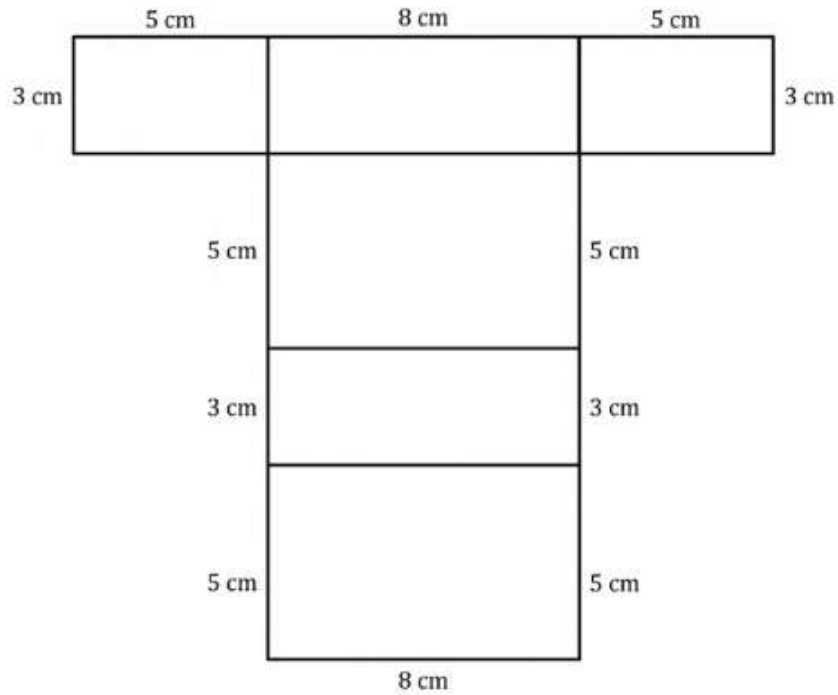
Question 9

A factory worker packs as many $2\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ puzzle cubes into a cardboard box.



The net of the box is pictured below.

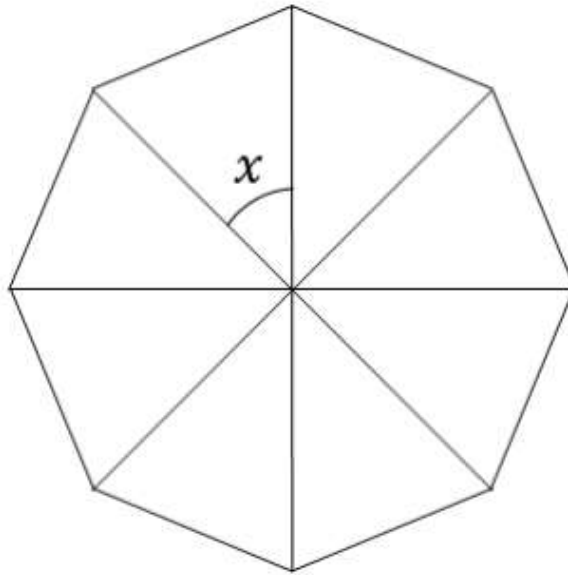
If each puzzle cube costs $\pounds 1.54$ to make, and sells for $\pounds 5.50$, find the profit the factory makes from this box.



Shapes Exam Questions

Question 10

The diagram below shows a regular polygon split into equal sections.

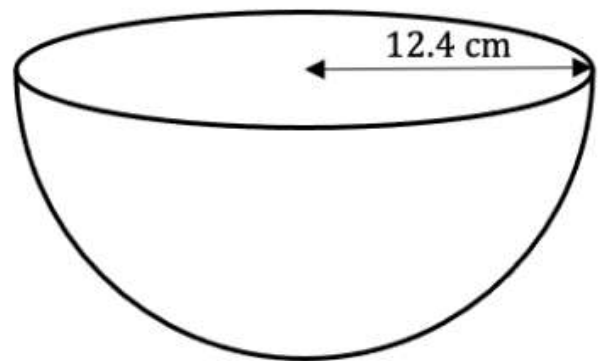


Find the size of the angle marked x .

Shapes Exam Questions

Question 11

Calculate the surface area of the hemisphere shown below, using the formula given.



$$\text{Surface area of a hemisphere} = 3\pi r^2$$

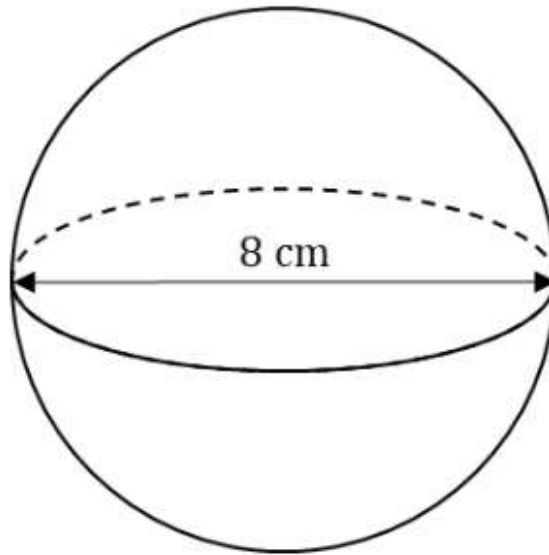
$$\pi = 3.14$$

$$r = 12.4 \text{ cm}$$

Shapes Exam Questions

Question 12

The diagram shows a spherical glass paperweight with a diameter, d , of 8 cm.



The density of glass is 8.23 g/cm^3

$$\text{Volume of a sphere} = \frac{4}{3}\pi r^3$$

You are given that $\pi = 3.14$

Calculate the mass of the paperweight in grams.

Give your answer to the nearest whole number.

Shapes Exam Questions

Question 12

