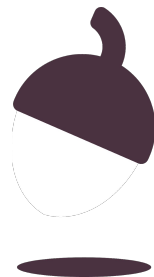Mathematics

Coordinates and shapes:
Solve practical problems involving circles.

Independent Task

Miss Parsons

OAK NATIONAL ACADEMY

Question 1

Luke creates a line of five pence pieces. It is 10.8 cm long.

How many five pence pieces does he use?

Question 2

Use your knowledge of circles to solve the problems.

1. What is the length of the column and row of coins shown?

2. Three coins of equal value are added to the left of the 2 pence piece to increase the row. The length increases by 5.4 cm. Which coin has been added?

3. Four coins are added in the positions shown by the x on the diagram. The length of this row is 9.9 cm. What coins could have been added? How do you know?

Coin	Radius
1p	10 mm
2p	13 mm
5p	9 mm
10p	12.5 mm

3
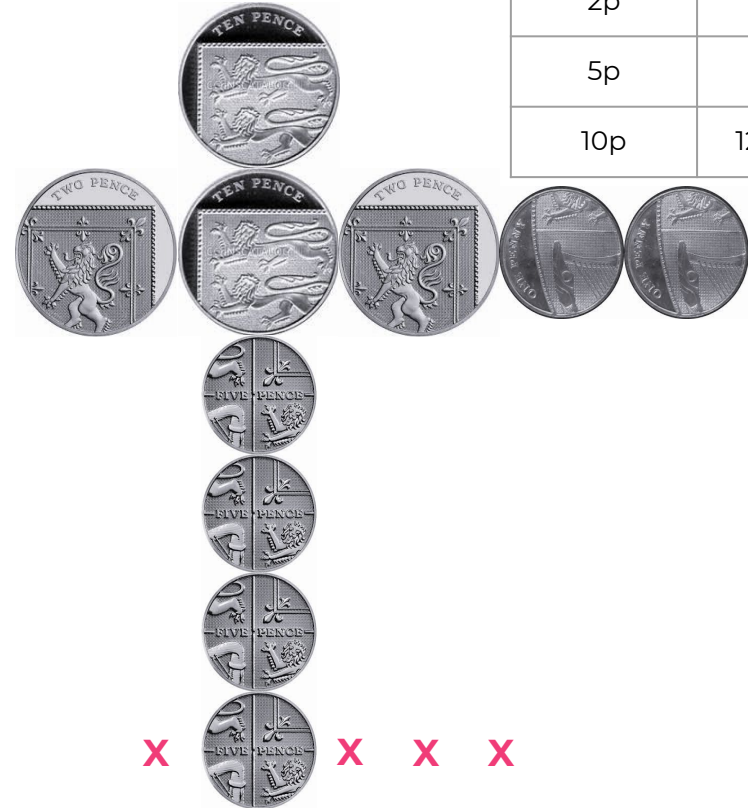
Question 3

Calculate the approximate circumference of each coin.

Coin	Radius
1p	10 mm
2p	13 mm
5p	9 mm
10p	12.5 mm

Question 4
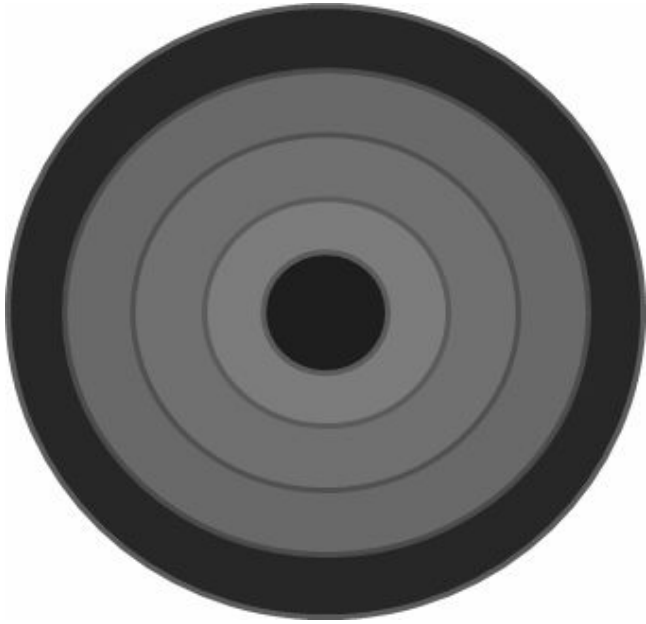
The smallest circle of the dart board has a radius of 1 cm.

The largest has a radius of 11 cm.

The circles increase in size by an equal amount each time.

What is the diameter of each of the five circles of the target board?

What is the approximate circumference of the target board?

Question 5

Is it possible to create a line of coins exactly 12 cm long?

Coin	Radius
1p	10 mm
2p	13 mm
5p	9 mm
10p	12.5 mm