

Four Maths Questions at Different Levels – Question Set 7

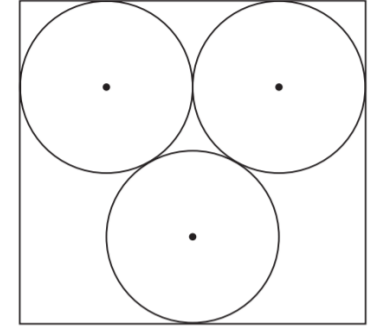
Easy higher tier GCSE

- (a) Write down the value of $36^{\frac{1}{2}}$
- (b) Write down the value of 23^0
- (c) Work out the value of $27^{-\frac{2}{3}}$

Edexcel GCSE, June 2018, Paper 1

Harder higher tier GCSE

The diagram shows 3 identical circles inside a rectangle. Each circle touches the other two circles and the sides of the rectangle, as shown in the diagram.

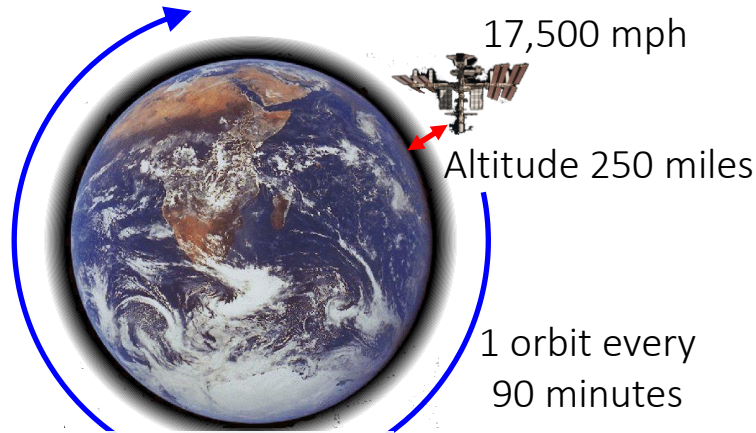


The radius of each circle is 24 mm.

Work out the area of the rectangle.
Give your answer correct to 3 significant figures.

Edexcel GCSE, June 2017, Paper 2

Something interesting



What is the circumference of the Earth?

(@colmanweb!)

A Level

$$f(x) = 2x^2 + 4x + 9 \quad x \in \mathbb{R}$$

Describe fully the transformation that maps the curve with equation $y = f(x)$ onto the curve with equation $y = g(x)$ where

$$g(x) = 2(x - 2)^2 + 4x - 3 \quad x \in \mathbb{R}$$

Find the range of the function

$$h(x) = \frac{21}{2x^2 + 4x + 9} \quad x \in \mathbb{R}$$

Edexcel, Paper 1, June 2019

Four Maths Questions at Different Levels – Answers Set 7

Easy higher tier GCSE

(a) Write down the value of $36^{\frac{1}{2}}$ 6

(b) Write down the value of 23^0 1

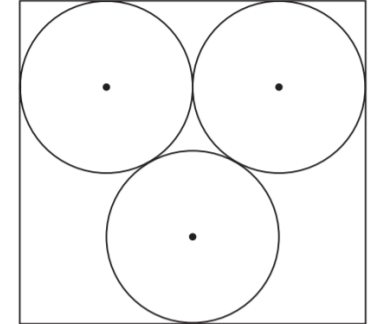
(c) Work out the value of $27^{-\frac{2}{3}}$ $\frac{1}{9}$

Edexcel GCSE, June 2018, Paper 1

Harder higher tier GCSE

The diagram shows 3 identical circles inside a rectangle. Each circle touches the other two circles and the sides of the rectangle, as shown in the diagram.

8600mm^2

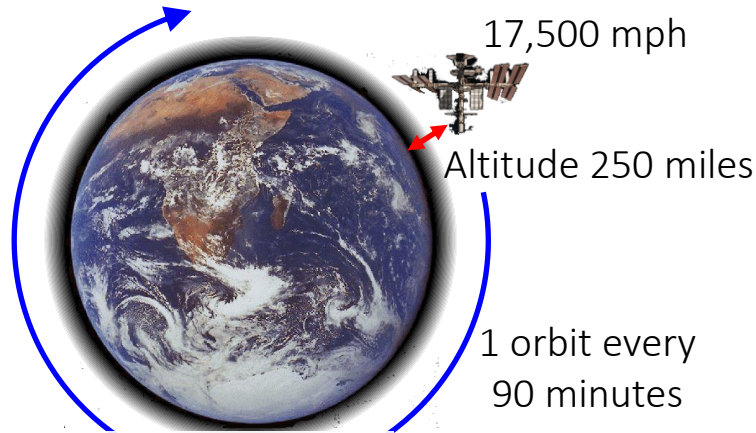


The radius of each circle is 24 mm.

Work out the area of the rectangle.
Give your answer correct to 3 significant figures.

Edexcel GCSE, June 2017, Paper 2

Something interesting



What is the circumference of the Earth?

$24,6800$ miles (@colmanweb!)

A Level

$$f(x) = 2x^2 + 4x + 9 \quad x \in \mathbb{R}$$

Describe fully the transformation that maps the curve with equation $y = f(x)$ onto the curve with equation $y = g(x)$ where

$$g(x) = 2(x - 2)^2 + 4x - 3 \quad x \in \mathbb{R}$$

Find the range of the function

$$h(x) = \frac{21}{2x^2 + 4x + 9} \quad x \in \mathbb{R}$$

Translate $\begin{pmatrix} 2 \\ -4 \end{pmatrix}$

$0 < h(x) \leq 3$

Edexcel, Paper 1, June 2019