

Pythagoras



AB = 5cm, BD = 12cm. Find the length of AD

Reverse Mean

There are 10 men, 10 women and 20 children in a race.

The mean time for the men is 25
The mean time for the women is 17
The mean time for everyone is 26

Calculate the mean score for the children.

Standard Form

Write as an ordinary number:

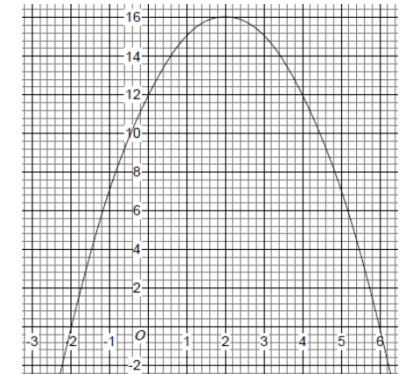
- (1) 3.75×10^4
- (2) 2.59×10^{-5}

Work out the value in standard form:

- (1) $(3.4 \times 10^7) \times (5 \times 10^{-4})$
- (2) $(3.12 \times 10^7) \div (4 \times 10^{-4})$

Quadratic Curves

Identify and label the (1) turning point and (2) the roots on this curve.



Indices

Find the value of:

- (1) $49^{-\frac{1}{2}}$
- (2) $\left(\frac{49}{100}\right)^{\frac{1}{2}}$
- (3) $\left(\frac{125}{1000}\right)^{\frac{2}{3}}$

Estimating Volumes

The formula for the volume of a cone is $V = \frac{1}{3}\pi r^2 h$

The cone has a height of 7.59cm and a volume of 197.8cm^3

Estimate the radius.

Recurring Decimals

Prove that $0.\dot{5} \times 0.\dot{8}\dot{1}$ is equal in value to $\frac{5}{11}$

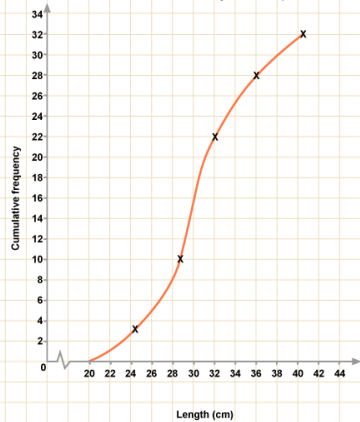
Quadratic Inequalities

Solve:

- (a) $x^2 + 3x - 40 < 0$
- (b) $2x^2 - 5x - 3 > 0$

Out of the 32 students. How many have an arm length greater than 34cm?

Cumulative Frequency



Quadratic Sequences

Find an expression in terms of n for the following sequence

5, 13, 25, 41, 61

Changing the Subject

Make y the subject of:

- (1) $m = \sqrt[3]{\frac{y+4}{5}}$
- (2) $m = \frac{12(p-3y)}{y}$
- (3) $x - m = \frac{4k - xp}{w}$

Parallel Lines

Which of these lines are parallel?

- (1) $y = 2x + 5$
- (2) $4y = 12x - 8$
- (3) $3y + 6x = 9$
- (4) $5y - 10x + 2 = 0$