



Factorise

$$x^2 - y^2 = (x - y)(x + y)$$

Write  $5250 \times 10^{-12}$  in standard form.

$$5.25 \times 10^{-9}$$

In February, a website had 90% more views than it did in January.

In March, the website had 5% less views than it did in February.

In March, the website had 45125 views.

$$\boxed{25000}$$

How many views did the website have in January?

$$\begin{array}{c}
 y \xrightarrow{\times 1.9} \quad \xrightarrow{\times 0.95} \quad 45125 \\
 \xleftarrow{\div 1.9} \quad \xleftarrow{\div 0.95}
 \end{array}$$

$$\begin{aligned}
 45125 \div 0.95 &= 47500 \\
 47500 \div 1.9 &= 25000
 \end{aligned}$$

Line 1 has gradient 8 and passes through the point (3, 10).

What is its equation?

$$y = 8x - 14$$

Write down the equation of a line perpendicular to line 1.

$$y = -\frac{1}{8}x + 1$$

$$(x + 9)(x - 2)(x + 1) \equiv x^3 + ax^2 - 11x + b$$

Find a and b.

$$(x^2 + 7x - 18)(x + 1)$$

$$x^3 + 7x^2 - 18x + x^2 + 7x - 18$$

$$x^3 + 8x^2 - 11x - 18$$

$$a = 8$$

$$b = -18$$