

Index Notation

Evaluate

1) 50^0

2) 2^{-3}

3) $125^{\frac{2}{3}}$

Completing the Square

1) $x^2 + 6x + 10 = 0$

2) What is the coordinate of the minimum point?

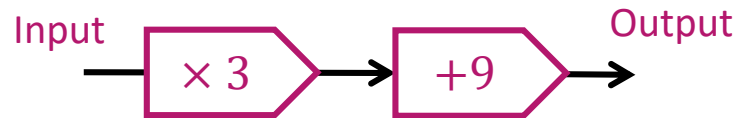


Quick Wits

Higher 5

Function Machines

The output is 4 times as big as the input. What is the value of the input?



Probability

There are 1000 people in the school. Within the school there are 150 more girls than boys. What is the probability of selecting a boy?

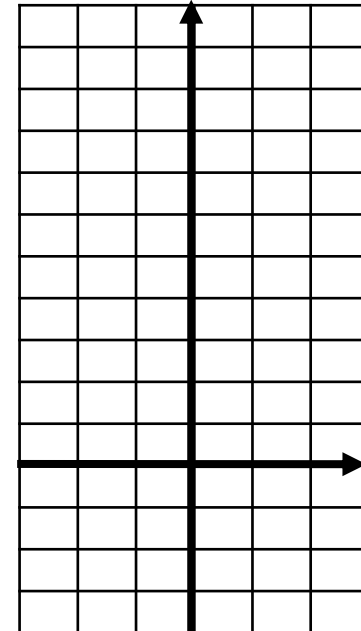
Expand and Factorise

1) Expand $(x + 4)(x - 5)$

2) Factorise $x^2 - 9$

Drawing Graphs

Plot the graph $y = 2x + 1$ for $-2 \leq x < 2$.



Index Notation

Evaluate

$$1) 50^0 = 1$$

$$2) 2^{-3} = \frac{1}{2^3} = \frac{1}{8}$$

$$3) 125^{\frac{2}{3}} = (\sqrt[3]{125})^2 \\ = 5^2 = 25$$

Completing the Square

$$1) x^2 + 6x + 10 = 0$$

$$(x + 3)^2 - 9 + 10 = 0$$

$$(x + 3)^2 + 1 = 0$$

2) What is the coordinate of the minimum point?

$$(-3, 1)$$

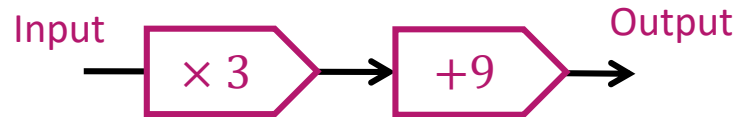


Quick Wits

Higher 5

Function Machines

The output is 4 times as big as the input. What is the value of the input?



$$3x + 9 = 4x$$

$$x = 9$$

Probability

There are 1000 people in the school. Within the school there are 150 more girls than boys. What is the probability of selecting a boy?

$$\text{Boys} = x \text{ and Girls} = x + 150$$

$$x + x + 150 = 1000$$

$$2x + 150 = 1000$$

$$2x = 850$$

$$x = 425$$

$$P(\text{Boy}) = \frac{425}{1000} = \frac{17}{40}$$

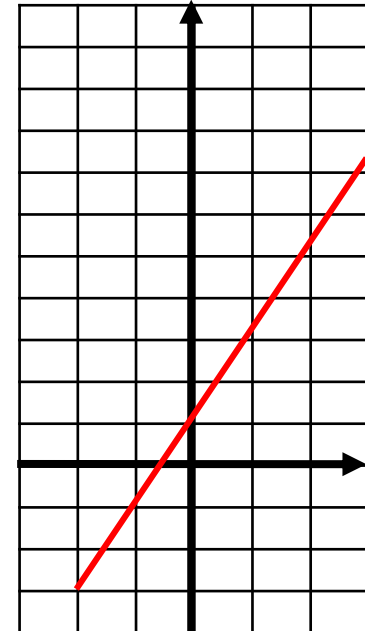
Expand and Factorise

$$1) \text{ Expand } (x + 4)(x - 5) \\ = x^2 + 4x - 5x - 20 \\ = x^2 - x - 20$$

$$2) \text{ Factorise } x^2 - 9 \\ = (x + 3)(x - 3)$$

Drawing Graphs

Plot the graph $y = 2x + 1$ for $-2 \leq x < 2$.



ANSWERS