



Estimate the cube root of 50.

3.6 to 3.8

Which of these equations has a rational solution?

Equation 1

$$\frac{3}{4}x^2 = 30$$

$$x^2 = 40$$

Not rational

Equation 2

$$\frac{2}{25}x^3 = 10$$

Equation 3

$$\frac{2}{3}x^4 = 6$$

$$x^4 = 9$$

not rational

$$2x^3 = 250$$

$$x^3 = 125$$

$$x = 5 \quad \underline{\text{rational}}$$

The probability that Ben goes running on a Sunday is 0.8

0.2

The probability that Tomos goes running on a Sunday is 0.7

0.3

Calculate the probability that both Ben and Tomos do not go for a run on Sunday.

$$0.2 \times 0.3 = 0.06$$

Roscoe invests £800 in a saving account that pays compound interest of:

2% for the first year

1% for the second year

0.5% for each year after

$$800 \times 1.02 = 816$$

$$816 \times 1.01 = 824.16$$

Work out how many years it will take for Roscoe to have at least £1000 in the savings account.

$$824.16 \times 1.005^{39} = 1001.12 \dots$$

41 years

x	2	4	b
y	20	a	5000

y is inversely proportional to the square of x

$$y = \frac{k}{x^2} \quad y = \frac{80}{x^2}$$

Find a and b.

$$y = \frac{80}{x^2} = 5$$

$$a = 5$$

$$5000 = \frac{80}{b^2}$$

$$b = 0.12649 \dots$$

$$b^2 = 0.016$$

$$= 0.1265$$

$$b = 0.12649 \dots$$

to 4dp

$$20 = \frac{k}{4}$$

$$k = 80$$