Further Proportionality

Maths

Mrs Dennett

Further proportionality

1. y is directly proportional to x

x is directly proportional to z^2

y = 50 when x = 10

z = 20 when x = 800

Find the value of y when z = 12

2. g is directly proportional to $\sqrt{h}$

u is inversely proportional to g

When h = 64, g = 16

When g = 5, u = 10

a) Find a formula connecting u and h

b) Find the value of u when h = 100

Answers

Further proportionality

1. y is directly proportional to x

x is directly proportional to z^2

y = 50 when x = 10

z = 20 when x = 800

Find the value of y when z = 12

   y = 5x

   $x = 2z^2$

   So $y = 10z^2$

   When z = 12, y = 1440

2. g is directly proportional to $\sqrt{h}$

u is inversely proportional to g

When h = 64, g = 16

When g = 5, u = 10

a) Find a formula connecting u and h

b) Find the value of u when h = 100

   $g = 2\sqrt{h}$

   $u = \dfrac{50}{g}$

   So $u = \dfrac{25}{\sqrt{h}}$

   When h = 100, u = 2.5