

28th June

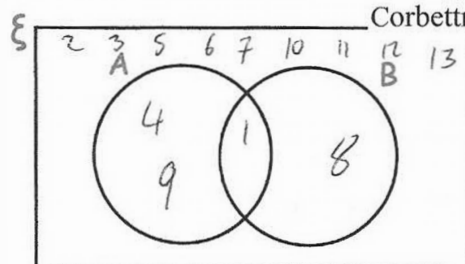


Corbettmaths

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\}$

$A = \{\text{square numbers}\} \quad 1 \quad 4 \quad 9$

$B = \{\text{cube numbers}\} \quad 1 \quad 8$



Find  $P(A \cup B)$

$$\frac{4}{13}$$

Find  $P(B|A)$

$$\frac{1}{3}$$

$f(x) = \frac{4x}{3} - 2$

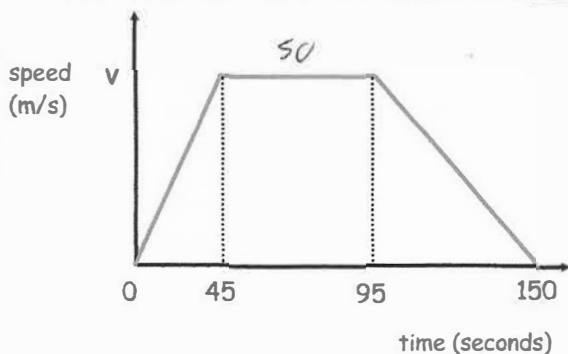
Work out the value of  $f^{-1}(10)$

$$y = \frac{4x}{3} - 2 \quad y + 2 = \frac{4x}{3}$$

$$\frac{3(y+2)}{4} = x$$

$f^{-1}(x) = \frac{3(x+2)}{4}$

$f^{-1}(10) = \frac{3(12)}{4}$   
 $= 9$



The journey took 150 seconds.  
The train travelled 1.53km in the 150 seconds.  
Work out the value of  $v$ .

$$v = 15.3 \text{ m/s}$$

Here is a speed-time graph for a train journey.

$$\frac{1}{2}(50 + 150) \times v = 1530$$

$$v = 15.3 \text{ m/s}$$