



$4x = 5y$        $x:y = 5:4$   
 $2y = 7z$        $y:z = 7:2$   
 x, y and z are positive numbers.  
 Write the ratio x:y:z

$$\begin{aligned}
 x & y & z \\
 5 & : & 4 \\
 & & 7 : 2 \\
 \hline
 35 & : & 28 : 8 \\
 \hline
 35 & : & 28 : 8
 \end{aligned}$$

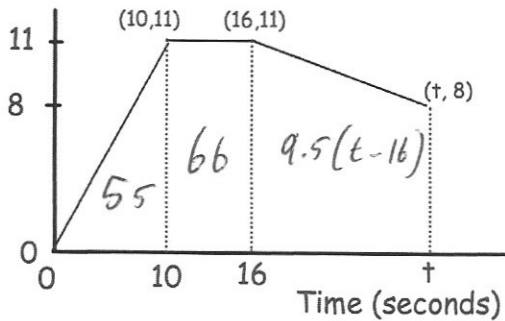
Given

$$y = \frac{3\sqrt{2}}{2}$$

Write an expression for  $y^3$

$$\begin{aligned}
 \frac{3\sqrt{2}}{2} \times \frac{3\sqrt{2}}{2} \times \frac{3\sqrt{2}}{2} &= \frac{27\sqrt{8}}{8} \\
 &= \frac{54\sqrt{2}}{8} \\
 &= \frac{27\sqrt{2}}{4}
 \end{aligned}$$

Speed (m/s)



Find t

$$\begin{aligned}
 0.775t &= 31 \\
 t &= 40
 \end{aligned}$$

The average speed from 0 to t seconds was 8.725m/s

$$\begin{aligned}
 s &= \frac{d}{t} = \frac{121 + 9.5t - 15t}{t} \\
 8.725t &= -31 + 9.5t
 \end{aligned}$$

Find the acceleration for the first 10 seconds of the journey.

$$1.1 \text{ m/s}^2$$

Find the nth term of the sequence

9 10 13 18 25 ...  
 1 3 5 7  
 2 2 2

$$\begin{aligned}
 a &= 1 \\
 b &= -2 \\
 c &= 10
 \end{aligned}$$

$$n^2 - 2n + 10$$