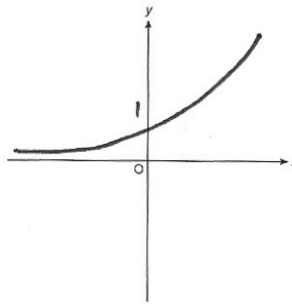




Sketch

$$y = 2^x$$

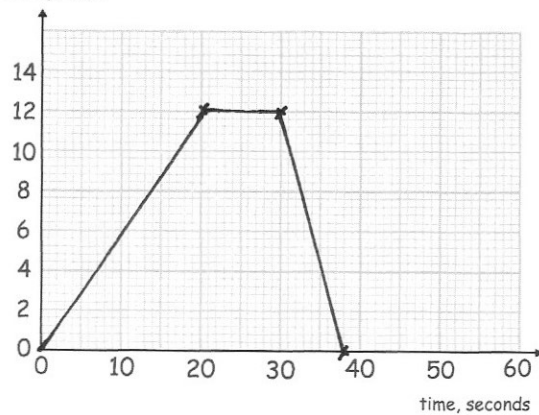


A remote control car drives in a straight line.

It starts from rest and travels with constant acceleration for 20 seconds reaching a velocity of 12m/s.
It then travels at a constant speed for 10 seconds.
It then slows down with constant deceleration of 1.5m/s². *8 seconds*

Draw a velocity-time graph and work out the total distance travelled.

Velocity, m/s



The line AB has equation $5x + 2y = 4$

Find the equation of the line parallel to AB that passes through the point $(4, -1)$

$$2y = -5x + 4$$

$$y = -2.5x + 2$$

$$y = -\frac{5}{2}x + c$$

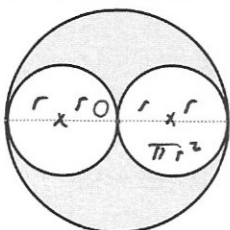
$$-1 = -\frac{20}{2} + c$$

$$-1 = -10 + c \quad c = 9$$

$$y = -\frac{5}{2}x + 9$$

or

$$y = -2.5x + 9$$



whole circle:

$$\pi(2r)^2 = 4\pi r^2$$

$$\frac{4\pi r^2 - 2\pi r^2}{4\pi r^2} \times 100$$

Two identical small circles are drawn inside a large circle.

What percentage of the large circle is shaded?

50%