

4th June



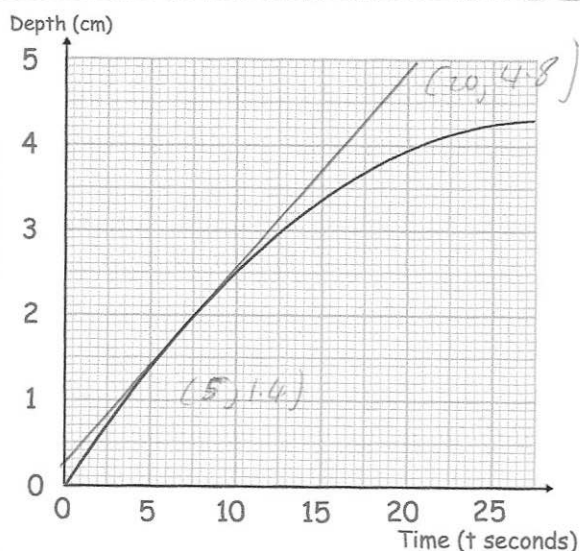
Corbettmaths

Which of these values cannot be the sine of an angle?

0 -0.9 $\frac{2}{3}$ **1.2**

Calculate an estimate for the gradient of the graph when $t = 5$ seconds.

$$\frac{4.8 - 1.4}{20 - 5} = \frac{3.4}{15} = 0.226$$



$h(x) = 2x + 1$

Find the value of a such that $h(a) = h^{-1}(a)$

$$y = 2x + 1 \quad x = \frac{y-1}{2}$$

$$y-1 = 2x \quad f^{-1}(y) = \frac{y-1}{2}$$

$$2a + 1 = \frac{a-1}{2}$$

$$4a + 2 = a - 1$$

$$3a = -3$$

$$a = -1$$

Find the set of values of x that satisfy both

$$2x - 6 > 6 - 6x$$

and

$$x^2 - 6x + 2 < 42$$

$$x^2 - 6x - 40 < 0$$

$$(x+4)(x-10)$$

$$x = -4 \quad x = 10$$

