

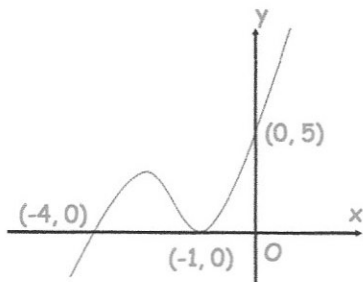


Which of these values cannot be the cosine of an angle?

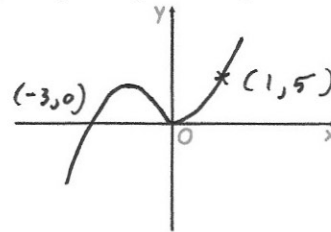
-1 (3) 0.7 -0.04

Shown below is the curve with equation $y = f(x)$.

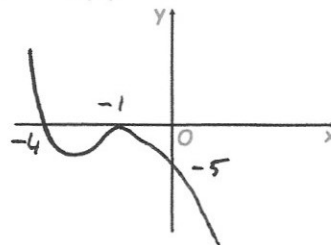
The curve passes through the points $(-4, 0)$, $(-1, 0)$ and $(0, 5)$



Sketch $y = f(x - 1)$ *one right*



Sketch $y = -f(x)$



Jenson and Burt each write down a proper fraction.

Jenson wrote down a fraction, where the denominator is one more than twice the numerator.

$$\frac{x}{2x+1}$$

Both the numerator and denominator of Burt's fraction are three more than Jenson's.

$$\frac{x+3}{2x+4}$$

The sum of the two fractions is $\frac{37}{36}$

$$\frac{x}{2x+1} + \frac{x+3}{2x+4} = \frac{37}{36}$$

$$\frac{x(2x+4) + (x+3)(2x+1)}{(2x+1)(2x+4)} = \frac{37}{36}$$

Find the difference between the fractions.

$$4x^2 - 26x + 40 = 0$$

$$2x^2 - 13x + 20 = 0$$

$$(2x - 5)(x - 4) = 0$$

$$x = 2.5 \quad x = 4 \checkmark$$

$$x = 4$$

$$\frac{4}{9} \text{ and } \frac{7}{12}$$

$$\frac{7}{12} - \frac{4}{9}$$

$$\frac{21}{36} - \frac{16}{36}$$

$$= \frac{5}{36}$$

$$36(2x^2 + 4x + 2x^2 + 7x + 3) = 37(4x^2 + 10x + 4)$$

$$36(4x^2 + 11x + 3) = 37(4x^2 + 10x + 4)$$

$$144x^2 + 396x + 108 = 148x^2 + 370x + 148$$