

29th June



Corbettmaths

$$f(x) = \frac{x+1}{3} \text{ and } g(x) = \frac{2}{x+2}$$

Find the values of a such that

$$f(a) = g(a) \quad \frac{a+1}{3} = \frac{2}{a+2}$$

$$(a+1)(a+2) = 6$$

$$a^2 + 3a + 2 = 6$$

$$a^2 + 3a - 4 = 0$$

$$(a-1)(a+4) = 0$$

$$a = 1$$

or

$$a = -4$$

There are 20 passengers on a coach. 70% of the passengers are going to Bristol. ¹⁴

The rest are going to Bath. ⁶

Four passengers are chosen at random to complete a survey.

Calculate the probability that all four passengers are going to Bath

$$\frac{6}{20} \times \frac{5}{19} \times \frac{4}{18} \times \frac{3}{17}$$

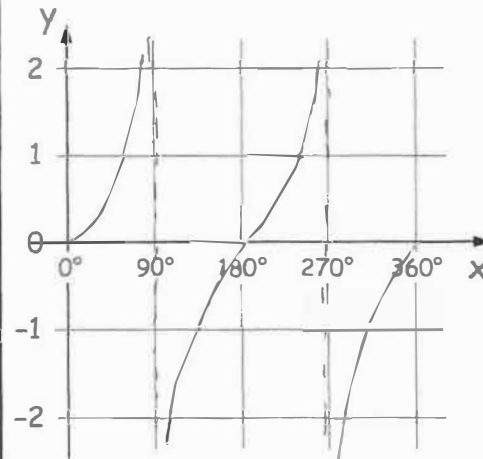
$$= \frac{1}{323}$$

Here is a graph for $270^\circ \leq x \leq 360^\circ$

Circle which graph it is

$$y = \sin(x) \quad y = \cos(x)$$

$$y = \tan(x)$$



Complete the graph

The line l is a tangent to the circle

$$x^2 + y^2 = 34 \text{ at the point P.}$$

P is the point (3, 5)

Work out the equation of the line l

gradient of OP = $\frac{5}{3}$

gradient of $l = -\frac{3}{5}$

$$y = -\frac{3}{5}x + c$$

$$5 = -\frac{9}{5} + c$$

$$c = \frac{34}{5}$$

$$y = -\frac{3}{5}x + \frac{34}{5}$$