

5th September

Corbettmaths

Expand and simplify fully $(x - 1)^3$

$$A = 3x \quad B = 8x$$

C is 35% more than A

D is 8% less than B

D is 1324 greater than C

Work out the value of x

The transformation matrix

$$\begin{pmatrix} p & q \\ 2p & 7q \end{pmatrix}$$

maps the point (1, 3) to the point (0, -15).

Find p and q

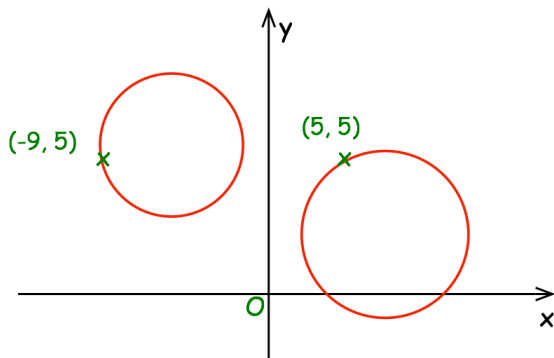
Shown below are two circles.

Circle 1 has equation

$$(x + 6)^2 + (y - 6)^2 = 10$$

Circle 2 has equation

$$(x - 7)^2 + (y - 2)^2 = 13$$

The line l_1 is a tangent to Circle 1 at the point $(-9, 5)$ The line l_2 is a tangent to Circle 2 at the point $(5, 5)$ The lines l_1 and l_2 intersect at the point A.
Find the coordinates of the point A.