Calculate the exact trigonometric values

Cos (0)	1
Cos (30)	$\frac{\sqrt{3}}{2}$
Cos (45)	$\frac{\sqrt{2}}{2}$
Cos (60)	0.5
Cos (90)	0

Write 0.352 as a fraction in its simplest form.

$x = 0.\dot{3}5\dot{2}$

$10x = 3.\dot{5}2\dot{3}$

$100x = 35.2\dot{3}5$

$1000x = 352.\dot{3}5\dot{2}$

$999x = 352$

$x = \frac{352}{999}$

Find the interior and exterior angle of a regular decagon.



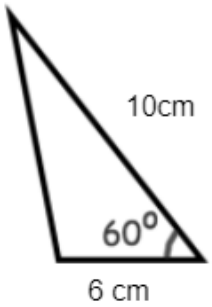
$180 - 36$

$360 \div 10$

Interior ..... 144°

Exterior ..... 36°

Work out the area of this triangle



$\frac{1}{2} \times 6 \times 10 \times \sin(60)$

$\frac{1}{2} \times 10 \times \frac{\sqrt{3}}{2} = \frac{60\sqrt{3}}{4}$

$= 15\sqrt{3}$ ..... cm^2

Simplify $\frac{3\sqrt{6}}{\sqrt{6}-3}$

$\times (\sqrt{6}+3)$

$\times (\sqrt{6}+3)$

$\frac{3\sqrt{36} + 9\sqrt{6}}{6 + 3\sqrt{6} - 3\sqrt{6} - 9}$

$= \frac{18 + 9\sqrt{6}}{-3} = -6 - 3\sqrt{6}$

Liquid A has a density of 5 g/cm^3
Liquid B has a density of 20g/cm^3
200ml of liquid A is mixed with 100ml of liquid B to make liquid C.
Work out the density of liquid C

	Density	Mass	Volume
Liquid A	5	1000	200
Liquid B	20	2000	100
Liquid C	10	3000	300

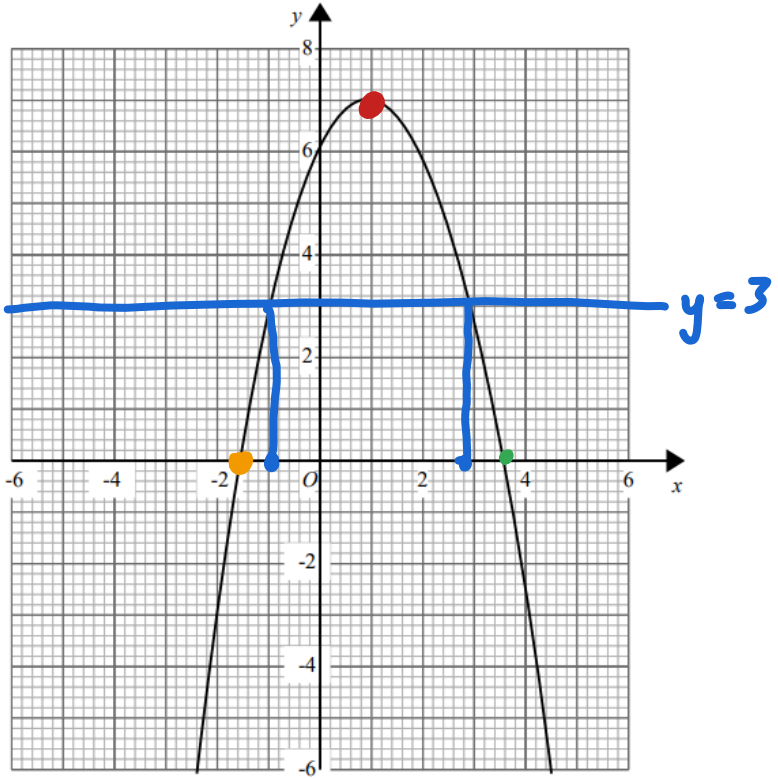
$5 \times 200 = 1000$

$20 \times 100 = 2000$

$1000 + 2000 = 3000$

$3000 \div 300 = 10$

Here is the graph of $y = 2x + 6 - x^2$



Write down the turning point of the graph $y = 2x + 6 - x^2$

(1 , 7)

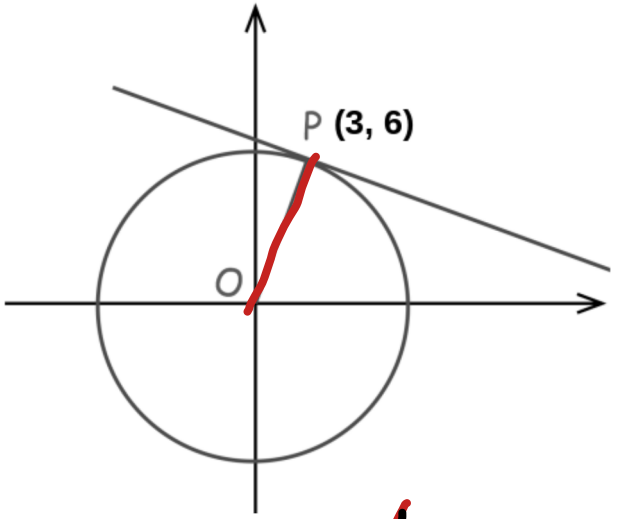
Use the graph to find the roots of the equation $2x + 6 - x^2 = 0$

-1.6 and 3.6

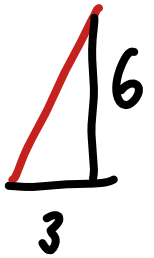
Use the graph to find the roots of the equation $2x + 6 - x^2 = 3$

-1 and 2.9

The diagram shows the circle $x^2 + y^2 = 45$ with a tangent at the point (3, 6)



Find the gradient of the line OP



$\frac{6}{3} = 2$

Find the gradient of the tangent

$-\frac{1}{2}$

Find the equation of the tangent

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

$6 = -\frac{1}{2} \times 3 + c$

$c = 7.5$

$y = -\frac{1}{2}x + 7.5$