

Question 1

Complete the following table with the *exact values* of the missing trigonometric functions.

Assuming α is in région I (acute angle)

$\sin(\alpha)$	$\cos(\alpha)$	$\tan(\alpha)$
$\frac{5}{13}$	$\sqrt{1 - \left(\frac{5}{13}\right)^2} = \frac{12}{13}$	$\frac{5}{12}$
$\sqrt{1 - \left(\frac{4}{5}\right)^2} = \frac{3}{5}$	$\frac{4}{5}$	$\frac{3}{4}$
$\sqrt{1 - \left(\frac{6}{7}\right)^2} = \frac{\sqrt{13}}{7}$	$\frac{1}{\sqrt{1 + \left(\frac{\sqrt{13}}{6}\right)^2}} = \frac{6}{7}$	$\frac{\sqrt{13}}{6}$

Assuming β is in région II

$\sin(\beta)$	$\cos(\beta)$	$\tan(\beta)$
$\frac{5}{13}$		
	$-\frac{4}{5}$	
		$-\frac{\sqrt{13}}{6}$

Question 2

Complete the following table with approximate values

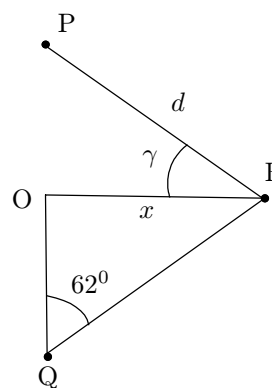
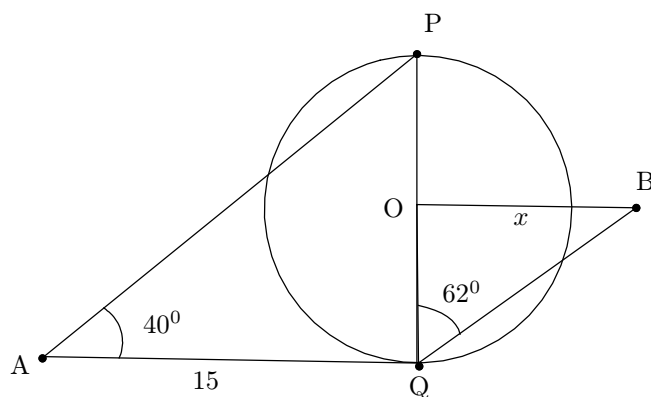
(using your calculator and the *inverse trigonometric functions*)

α°	α rad	$\sin(\alpha)$	$\cos(\alpha)$	$\tan(\alpha)$
		$\frac{5}{13}$		
			$\frac{4}{5}$	
				0.601

Question 3

P and Q are placed on a circle of center O. ($\widehat{AQP} = \widehat{QOB} = 90^\circ$)

- i) Find x , the distance BO
- ii) Find the *distance* between P and B.
- iii) Find angle $\gamma = \widehat{PBO}$



Question 4

Given that :

– Two circles of center C_1 and C_2
have same radius $r_1 = r_2 = 4\text{cm}$.

– The distance between the centers
is : $d(C_1, C_2) = 3\text{cm}$

i) Find angle $\widehat{C_1BC_2}$

ii) Find the *surface area* of
the polygon C_1, A, C_2, B

