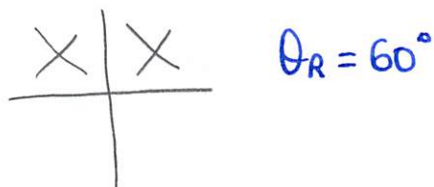


QUIZ 2.1 - 2.2

CALCULATOR SECTION

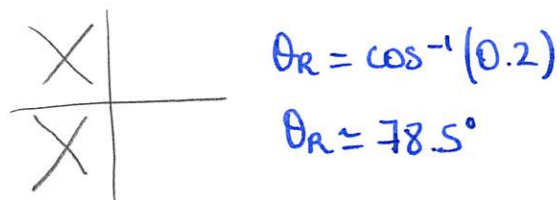
- 1) Solve the following equations. Give an exact value when possible. If not, round your answer to the nearest tenth. Show your work. [8]

a) $\sin \theta = -\frac{\sqrt{3}}{2}$ for $0^\circ \leq \theta \leq 360^\circ$.



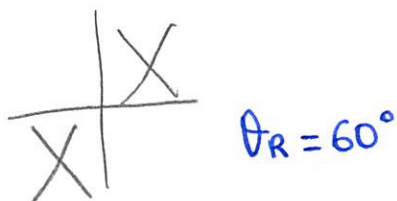
sol: $\{240^\circ, 300^\circ\}$

b) $\cos \theta = 0.2$ for $0^\circ \leq \theta \leq 360^\circ$



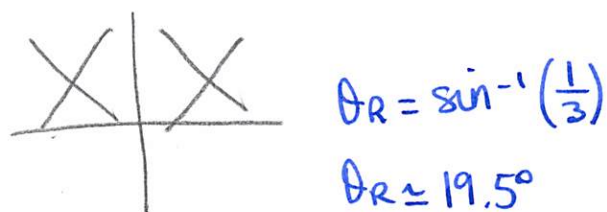
sol: $\{78.5^\circ, 281.5^\circ\}$

c) $\tan \theta = -\sqrt{3}$ for $0^\circ \leq \theta \leq 360^\circ$.



sol: $\{120^\circ, 300^\circ\}$

d) $\sin \theta = -\frac{1}{3}$ for $0^\circ \leq \theta \leq 360^\circ$

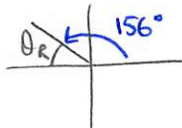


sol: $\{199.5^\circ; 340.5^\circ\}$

QUIZ 2.1 – 2.2

NO CALCULATOR SECTION

- 2) What is the reference angle for a 156° angle in standard position? [1]

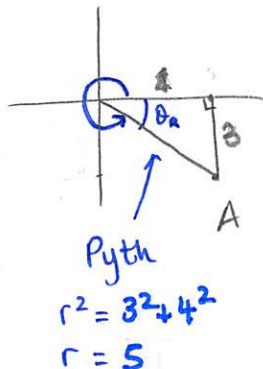


$$\theta_R = 24^\circ$$

- 3) What angles in standard position correspond to a 30° reference angle? [2]

$$\Rightarrow 30^\circ, 150^\circ, 210^\circ, 330^\circ$$

- 4) Determine $\cos \alpha$, $\sin \alpha$ and $\tan \alpha$ where α is an angle in standard position whose terminal arm passes through $A(4, -3)$. [3]

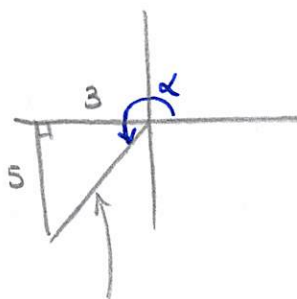


$$\cos \alpha = \frac{4}{5}$$

$$\sin \alpha = -\frac{3}{5}$$

$$\tan \alpha = -\frac{3}{4}$$

- 5) Determine $\cos \alpha$ and $\sin \alpha$, knowing that the terminal arm of angle α is in quadrant III and $\tan \alpha = 5/3$. [2]



Pyth

$$r^2 = 3^2 + 5^2$$

$$r^2 = 9 + 25$$

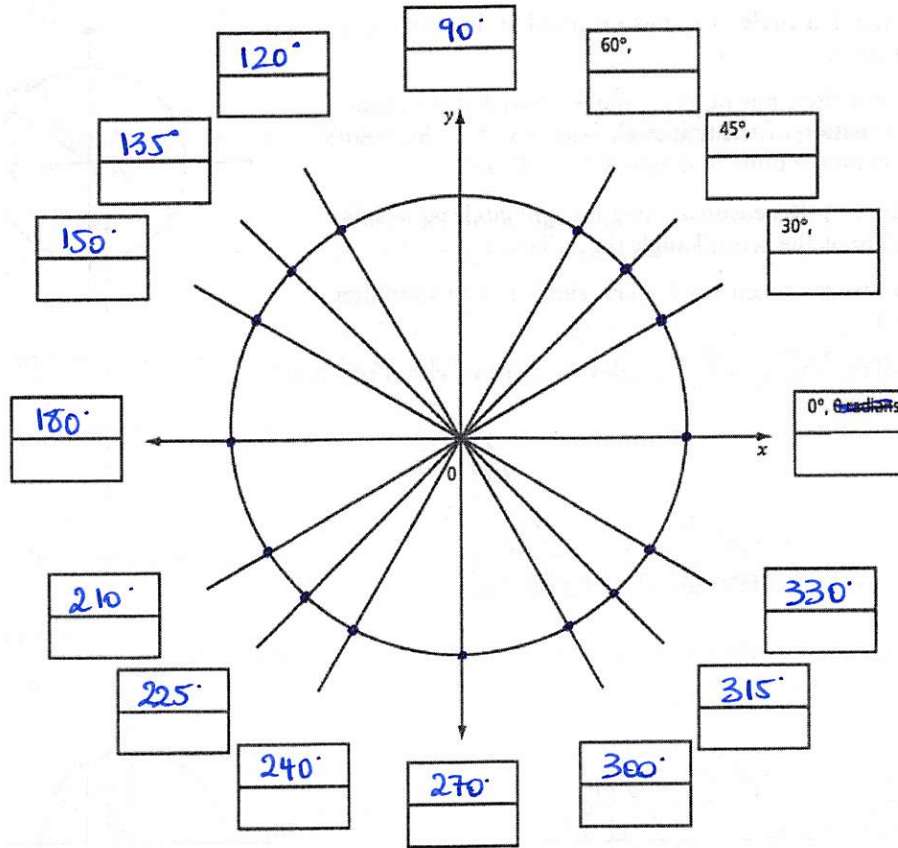
$$r^2 = 34$$

$$r = \sqrt{34}$$

$$\cos \alpha = -\frac{3}{\sqrt{34}}$$

$$\sin \alpha = -\frac{5}{\sqrt{34}}$$

- 6) Fill in the blanks with the angles on the top part and the coordinates of the points on the bottom parts of the boxes as well as the exact values of the ratios in the table. [4]



θ	0°	30°	45°	60°	90°	150°	180°	225°	270°	300°	315°	330°
$\cos \theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{\sqrt{3}}{2}$	-1	$-\frac{\sqrt{2}}{2}$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\sin \theta$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	$\frac{1}{2}$	0	$-\frac{\sqrt{2}}{2}$	-1	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{1}{2}$
$\tan \theta$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	undef	$-\frac{1}{\sqrt{3}}$	0	1	undef	$-\sqrt{3}$	-1	$-\frac{1}{\sqrt{3}}$