Ch 5 Quiz

Name: SayJay 14 /22

(No Calculators permitted on Page 1)

2. Evaluate using exact values and showing the angle and appropriate special triangle on the cartesian plane.

(a) $\sin 135° = \frac{1}{\sqrt{2}}$ ✓

(b) $\cot 210° = \frac{1}{2}$ ✗

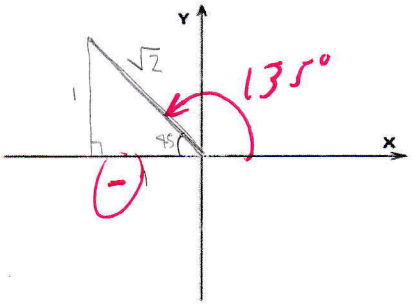
$= \frac{1}{\tan 210°}$

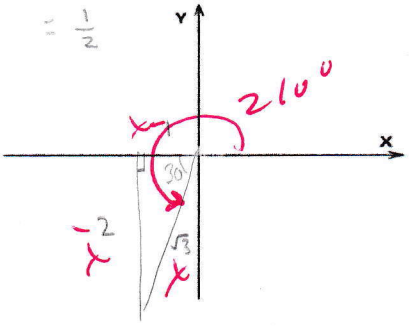
$= \frac{1}{\frac{2}{1}}$

$= \frac{1}{2}$

[6]

3





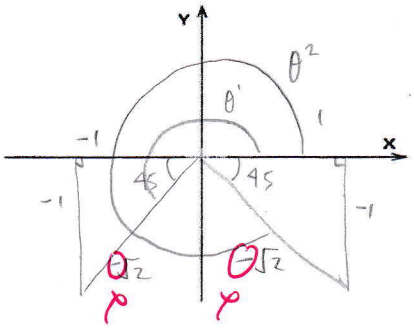
3. Determine all possible angles for $0° \leq x < 360°$. Show this on the cartesian plane and use the appropriate special triangles.

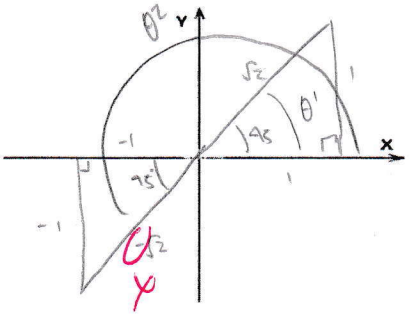
(a) $\sin x = -\frac{1}{\sqrt{2}}$ (exact)

(b) $\cot x = 1$ (exact)

[6]

5.5





Related Acute Angle = 45°

$\theta' = 180 + 45 = 225°$

$\theta^2 = 360 - 45 = 315°$

Related Acute Angle = 45°

$\theta' = 0 + 45 = 45°$

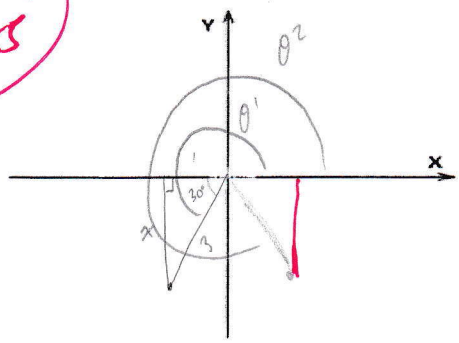
$\theta^2 = 180 + 45 = 225°$

/5

4. For $\sin A = -\frac{1}{3}$, determine all possible **exact** values of $\cos A$, and all angles of A to 1 decimal place. Show angles and related acute angle on the cartesian plane.

[5]

2.5



$3^2 = x^2 + (1^2)$

$x^2 = 3^2 - (1^2)$

$x^2 = 9 - 1$

$x^2 = 8$

$x = \pm\sqrt{8}$

$x = \pm 2\sqrt{2}$

$\cos A = \frac{\pm 2\sqrt{2}}{3}$

Related acute angle = 30°

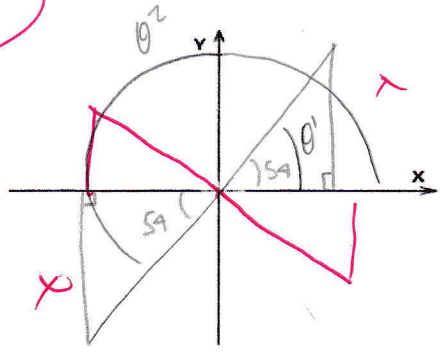
$\theta' = 180 + 30 = 210°$

$\theta^2 = 360 - 30 = 330°$

6. Find all possible angles for $0° \le x < 360°$ where $\tan x = -1.3748$ (1 dp)
Show angles and related acute angle on the cartesian plane.

[5]

2.5



$\tan x = -1.3748$

$\tan^{-1} = 53.9$

Related acute angle = 53.9° 54.0°

$\theta' = 0 + 53.9 = 53.9°$

$\theta^2 = 180 + 53.9 = 233.9°$

5