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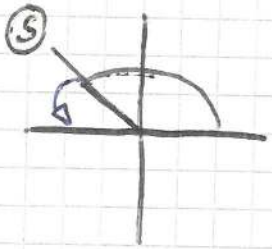
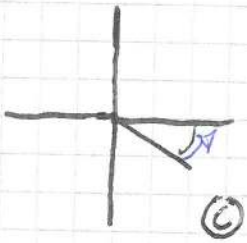
10.2 (By Akuoma Duru)

① a) Sin (150)



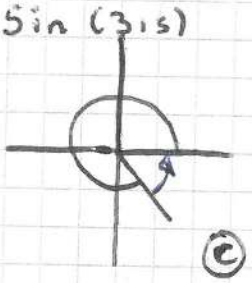
Sin (30)

b) Sin (-45)



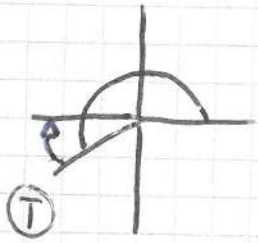
- Sin (45)

c) Sin (315)



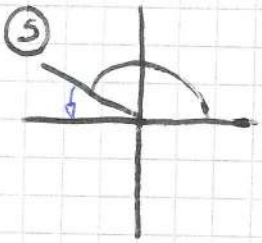
- Sin (45)

d) Sin (240)



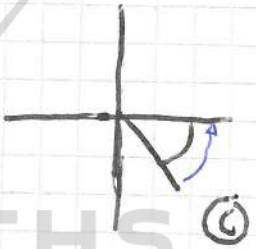
- Sin (60)

e) Cos (150)



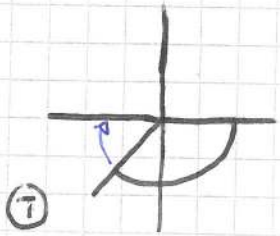
- Cos (30)

f) Cos (-60)



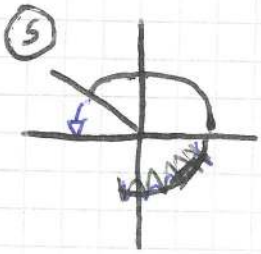
Cos (60)

g) Cos (-135)

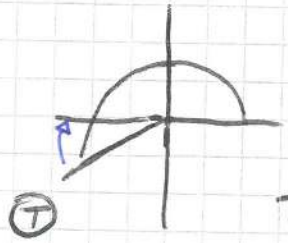


- Cos (45)

h) Cos (120)

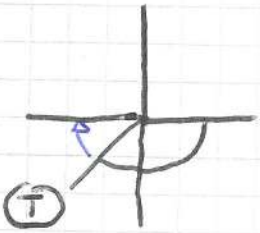


i) tan (225)



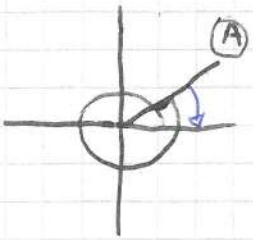
Tan (45)

j) tan (-150)



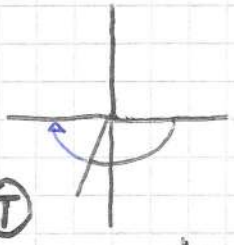
tan (30)

k) tan (405)



tan (45)

l) tan (-120)



tan (60)

(2)

$a \sin x + b = y$

$a \sin(0) + b = 3$

$0 + b = 3$

$b = 3$

$a \sin(90) + 3 = 5$

$a \sin(90) = 2$

$a = 2$

$2 \sin x + 3 = y$

$2 \sin(45) + 3 = 3 + \sqrt{2}$

$y = \sqrt{2} + 3$

(3) $a^2 = b^2 + c^2 - 2bc \cos a$

$10^2 = x^2 + 4x^2 - \left(4x^2 \times \frac{\sqrt{3}}{2}\right)$

~~$100 = 5x^2 - \frac{2x^2\sqrt{3}}{2}$~~

$100 = 5x^2 - 2x^2\sqrt{3}$

$100 = x^2(5 - 2\sqrt{3})$

$x^2 = \frac{100}{(5 - 2\sqrt{3})} = \frac{100(5 + 2\sqrt{3})}{(5 + 2\sqrt{3})(5 - 2\sqrt{3})}$

$\frac{100(5 + 2\sqrt{3})}{13}$