Class: Edward Bouchet
Subject: Extended Mathematics
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Formative 2 (Units 1, 2)

18
Excl

1.

a) $\text{Tan}\theta = \frac{O}{A}$

$x(\text{Tan}(35)) = \left(\frac{10}{x}\right)x$

$\frac{x\text{Tan}(35)}{\text{Tan}(35)} = \frac{10}{\text{Tan}(35)}$

$x = \frac{10}{\text{Tan}(35)}$

$x = 14.281\text{cm}$

$x = 14.28\text{cm}$

b) $\text{Sin}\theta = \frac{O}{H}$

$\text{Sin}(40) = \frac{8}{x}$

$x \cdot (\text{Sin}(40)) = \left(\frac{8}{x}\right) \cdot x$

$\frac{x\text{Sin}(40)}{\text{Sin}(40)} = \frac{8}{\text{Sin}(40)}$

$x = \frac{8}{\text{Sin}(40)}$

$x = 12.446\text{cm}$

$x = 12.45\text{cm}$

c) $\text{Cos}\theta = \frac{A}{H}$

$\text{Cos}(70) = \frac{x}{6}$

$6 \cdot (\text{Cos}(70)) = \left(\frac{x}{6}\right)6$

$6\text{Cos}(70) = x$

$x = 2.05\text{cm}$

d) $\text{Tan}\theta = \frac{O}{A}$

$\text{Tan}(22) = \frac{x}{18}$

$18 \cdot (\text{Tan}(22)) = \left(\frac{x}{18}\right)18$

$18\text{Tan}(22) = x$

$x = 7.27\text{cm}$

e) ~~Tan~~ $\text{Tan}\theta = \frac{O}{A}$

$\text{Tan}(31) = \frac{2.8}{x}$

$x\text{Tan}(31) = \frac{2.8}{\text{Tan}(31)}$

$x = \frac{2.8}{\text{Tan}(31)}$

$x = 4.66\text{cm}$

f) $\text{Sin}\theta = \frac{O}{H}$

$75 \cdot (\text{Sin}(55)) = \left(\frac{x}{75}\right) \cdot 75$

$75\,\text{Sin}(55) = x$

$x = 61.44\text{cm}$

2.

a) $\text{Cos}\theta = \frac{A}{H}$

$\text{Cos}\theta = \frac{3}{8}$

$\text{Cos}\theta = 0.375$

$\theta = \text{Cos}^{-1}(0.375)$

~~$\theta = 67.98\text{cm}\ 67.98°$~~

~~$x = 67.98\text{cm}\ 67.98°$~~

$x = 67.98°$

b) $\text{Tan}\theta = \frac{O}{A}$

~~$\text{Ca Tan}\theta = 20$~~

$\text{Tan}\theta = \frac{9}{20}$

$\theta = \text{Tan}^{-1}\left(\frac{9}{20}\right)$

$\theta = \text{Tan}^{-1}(0.45)$

$\theta = 24.23°$

$x = 24.23°$

~~c) $\text{Sin}\theta = \frac{O}{H}$~~

~~$\text{Sin}\theta = \frac{12}{13}$~~

~~$\text{Sin}\theta =$~~

~~$\theta =$~~

c)

$\text{Sin}\theta = \frac{O}{H}$

$\text{Sin}\theta = \frac{12}{13}$

$\theta = \text{Sin}^{-1}(12/13)$

$\theta = 67.38$

~~$67.38°$~~