

# Chapter 9 Practice Test

①  $\sin A = \frac{2\sqrt{42}}{23}$        $\cos A = \frac{19}{23}$        $\tan A = \frac{2\sqrt{42}}{19}$

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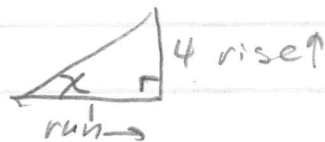
③  $67^\circ$        $x = \sin^{-1}\left(\frac{23}{25}\right)$

④ 20.9       $\cos 55^\circ = \frac{12}{x} \rightarrow x = \frac{12}{\cos 55^\circ}$

⑤ 13.4       $\tan 40^\circ = \frac{x}{16} \rightarrow x = 16 \tan 40^\circ$

⑥  $27^\circ$        $x = \tan^{-1}\left(\frac{11}{22}\right)$

⑦  $76.0^\circ$       Slope = 4  $\rightarrow \frac{\text{rise}}{\text{run}} = \frac{4}{1}$   
 $x = \tan^{-1}\left(\frac{4}{1}\right)$



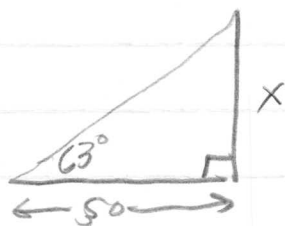
⑧ a) Elev from man to tree

b) Depression tree to man

c) Elev tree to birds

d) Depression birds to tree

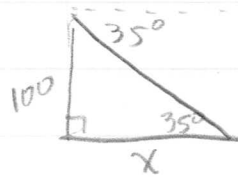
⑨ 102.1 ft



$\tan 63^\circ = \frac{x}{50} \rightarrow x = 50 \tan 63^\circ$

$x = 98.1 + 4$

(10) 142.8 ft



$$\tan 35^\circ = \frac{100}{x}$$

$$x = 100 \tan 35^\circ$$

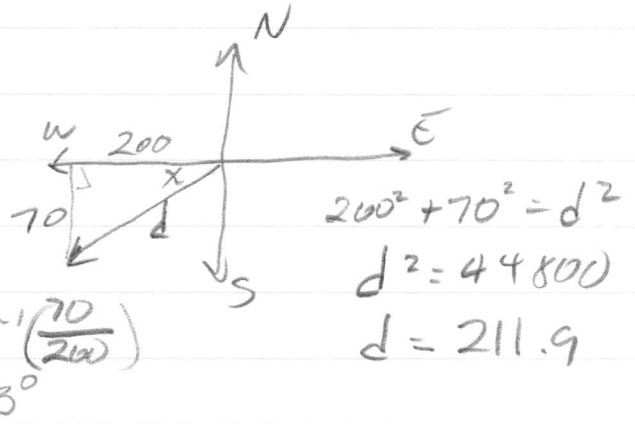
(11)  $\langle 92.9, 83.6 \rangle$

$$\cos 42^\circ = \frac{x}{125} \quad \text{and} \quad \sin 42^\circ = \frac{y}{125}$$

(12)  $\langle 120.4, -258.3 \rangle$

$$\sin 25^\circ = \frac{x}{285} \quad \text{and} \quad \cos 25^\circ = \frac{y}{285}$$

(13) 211.9 mi at  $19.3^\circ$  S of W



(14)  $\langle 4, 3 \rangle$

$$\begin{array}{r} \langle -2, 6 \rangle \\ + \langle 6, -3 \rangle \\ \hline \langle -2+6, 6+(-3) \rangle \end{array}$$

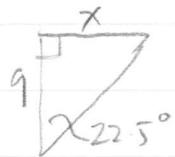
(15)  $18.8 \text{ cm}^2$

$$A = \frac{1}{2} (9)(6.5) \sin 40^\circ$$

(16)  $19.1 \text{ in}^2$

$$A = \frac{1}{2} (5)(8) \sin 73^\circ$$

(17)  $268.45 \text{ ft}^2$



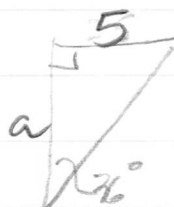
$$n = 8, \quad m\angle = 45^\circ$$

$$a = 9$$

$$x = 9 \tan 22.5^\circ = 3.727$$

$$p = 8 + 2 \cdot 3.727 = 56.647$$

(18)  $172.0 \text{ cm}^2$



$$n = 5$$

$$m\angle = 72^\circ$$

$$a = \frac{5}{\tan 36^\circ} = 6.882$$

$$p = 50$$