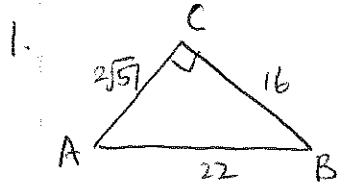


P 508: 1, 3, 5, 7, 11, 15, 17, 27, 29.



$$\sin B = \frac{2\sqrt{57}}{22} \approx 0.7$$

$$\cos B = \frac{16}{22} \approx 0.7$$

$$\tan B = \frac{2\sqrt{57}}{16} \approx 0.9$$

3. $\tan X^\circ = 1.11$

$$X = \tan^{-1}(1.11) = 48^\circ$$

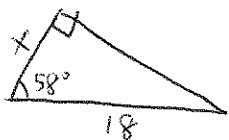
5. $\sin 34^\circ = \frac{5}{x}$

$$x = \frac{5}{\sin 34^\circ} = 9.0$$

7. $\cos X^\circ = \frac{12}{15}$

$$X^\circ = \cos^{-1}\left(\frac{12}{15}\right) = 36.9^\circ$$

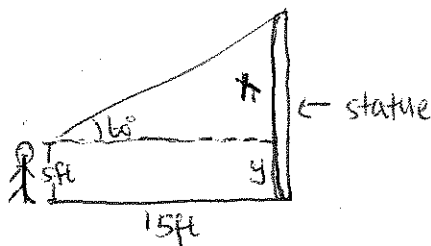
11.



~~cos~~
$$\cos 58^\circ = \frac{x}{18}$$

$$x = (\cos 58^\circ) \cdot 18 = 9.5$$

15.



$$H = x + y$$

$$\tan 16^\circ = \frac{x}{y}$$

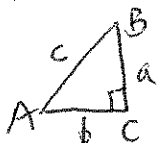
$$x = (\tan 16^\circ) \cdot y = 25.98$$

$$y = 5 \text{ ft}$$

$$H = x + y = 25.98 + 5 = 30.98 \text{ ft}$$

17. answer varies.

one possible answer

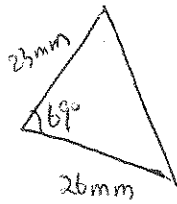


In a right triangle $\triangle ABC$, $\sin A = \frac{a}{c}$,

$\cos B = \frac{a}{c}$, so $\sin A = \cos B$, since $B = 90^\circ - A$

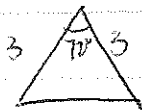
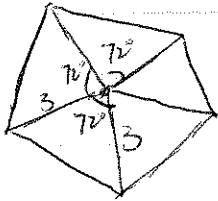
Therefore, $\sin A = \cos(90^\circ - A)$

27.



$$A = \frac{1}{2} \cdot 23 \cdot 26 \cdot \sin 69^\circ \\ = 279.14 \text{ mm}^2$$

29. A regular pentagon with radius 3 cm.



$$A = \frac{1}{2} \cdot 3 \cdot 3 \cdot \sin 72^\circ = 4.28$$

$$\text{Area of regular pentagon} = 5 \left(\frac{1}{2} \cdot 3 \cdot 3 \cdot \sin 72^\circ \right) = 21.4 \text{ cm}^2$$