Lesson 7.6

Practice Level C

1. $\sin R = \frac{72}{97} \approx 0.7423$, $\sin S = \frac{65}{97} \approx 0.6701$

2. $\sin R = \frac{28}{53} \approx 0.5283$, $\sin S = \frac{45}{53} \approx 0.8491$

3. $\sin R = \frac{91}{109} \approx 0.8349$, $\sin S = \frac{60}{109} \approx 0.5505$

4. $\cos A = \frac{77}{85} \approx 0.9059$, $\cos B = \frac{36}{85} \approx 0.4235$

5. $\cos A = \frac{51}{149} \approx 0.3423$, $\cos B = \frac{140}{149} \approx 0.9396$

6. $\cos A = \frac{21}{29} \approx 0.7241$, $\cos B = \frac{20}{29} \approx 0.6897$

7. $a \approx 16.6$, $b \approx 27.5$ **8.** $c \approx 45.7$, $d \approx 58.8$

9. $e \approx 3.1$, $f \approx 4.3$ **10.** $g \approx 15.9$, $h \approx 18.8$

11. $j \approx 62.9$, $k \approx 69.9$ **12.** $m \approx 92.2$, $n \approx 47.5$

13. 346.9 in. **14.** D

15. $AB = 149$, $\sin A = \frac{51}{149} \approx 0.3423$,

$\cos A = \frac{140}{149} \approx 0.9396$

16. $AC = 160$, $\sin A = \frac{9}{41} \approx 0.2195$,

$\cos A = \frac{40}{41} \approx 0.9756$

17. $AC = 20$, $\sin A = \frac{6\sqrt{61}}{61} \approx 0.7682$,

$\cos A = \frac{5\sqrt{61}}{61} = 0.6402$

18. $BC = 24$, $\sin A = \frac{3}{4} = 0.75$,

$\cos A = \frac{\sqrt{7}}{4} \approx 0.6614$

19. 321.4 m **20.** $b \sin A$ **21.** $a \sin B$

22. Since $h = b \sin A$ and $h = a \sin B$, by substitution $b \sin A = a \sin B$. So $\frac{\sin A}{a} = \frac{\sin B}{b}$.

23. 386 ft apart, 270 ft tall