Name:

Trig Unit Review 2

Solve the following triangles. Be sure to draw a diagram, and to show all of your work. Clearly label your answers.

Methods you may use: Right angle trigonometry, special right triangles, law of sines, law of cosines

1. $A = 37°$; $C = 90°$; $c = 22$
2. $B = 60°$; $C = 90°$; $a = 5$ (no decimals)
3. $A = 48°$; $B = 39°$; $a = 9$
4. $A = 60°$; $B = 90°$; $a = 7$ (no decimals)
5. $A = 90°$; $B = 45°$; $a = 15$ (no decimals)
6. $A = 40°$; $B = 90°$; $c = 5$
7. $A = 90°$; $b = 17$; $c = 15$
8. $A = 52°$; $a = 10$; $c = 12.4$
9. $A = 42°$; $a = 13$; $B = 59°$
10. $b = 16$; $a = 17.4$; $c = 20$
11. $B = 30°$; $a = 80$; $c = 70$
12. $B = 18°$; $b = 12$; $a = 19$
13. $C = 140°$; $c = 40$; $b = 20$
14. $B = 10°$; $b = 5$; $c = 25$
15. $a = 4$; $b = 11$; $C = 90°$
16. $a = 4$; $b = 2.5$; $B = 58°$
17. $C = 65°$; $c = 44$; $b = 32$
18. $B = 56°$; $b = 13$; $a = 14$
19. $a = 12$; $c = 16$; $B = 38°$
20. $°a = 8$; $b = 18$; $c = 13$
21. The pitcher's mound in baseball is 60 feet 6 inches from home plate. The bases are 90 feet apart.
    a. How far is the pitcher's mound from first base?
    b. What is the angle formed from home plate to the pitcher's mound to first base?

22. The pitcher's mound on a softball field is 46 feet from home plate. The distance between the bases are 60 feet.
    a. How far is the pitcher's mound from first base?
    b. What is the angle formed from home plate to the pitcher's mound to first base?

23. In triangle ABC, $A = 90°$; $B = \theta$; $a = 25$; $b = 7$
    a. Write all 6 trigonometric ratios based on the angle θ