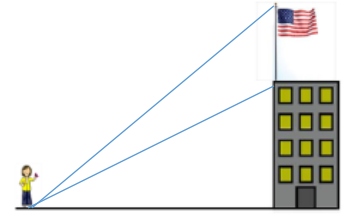


Name_____

G) $\cos F$
H) $\sin F$
I) $\sin E$

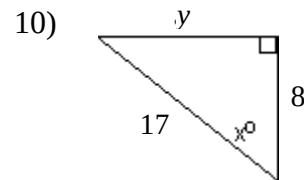
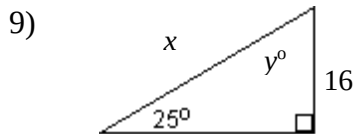
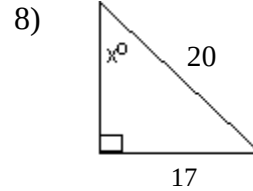
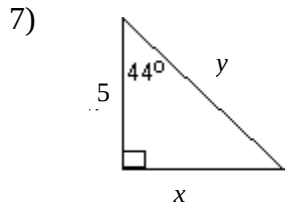
For #5 – 6: A flagpole is at the top of a building. A person is standing 100 feet from the base of the building. The angle of elevation to the top of the pole is 42° , and the angle of elevation to the bottom of the pole is 39° .

5) Find the height of the building to the nearest foot.

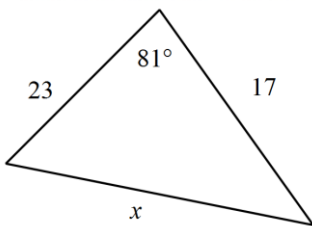


6) Find the length of the flagpole to the nearest foot.

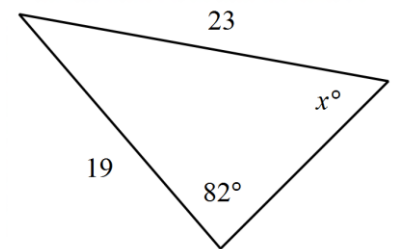
For #7 – 10, find the variable(s), rounded to the nearest hundredth.



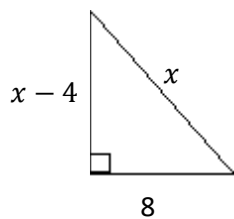
11) Find x to the nearest hundredth.



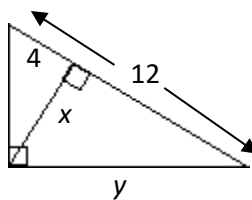
12) Find x to the nearest hundredth.



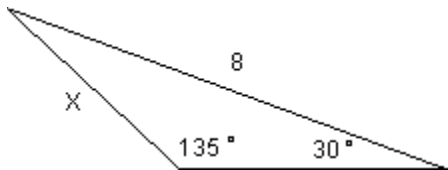
13) Solve for x . No calculator!



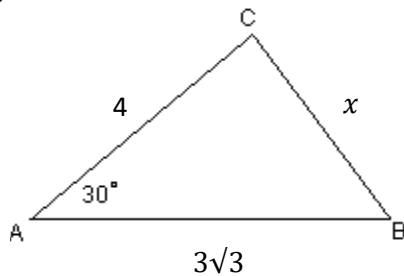
14) Find x and y . No calculator!



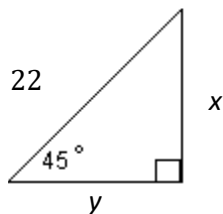
15) Find x . No calculator!



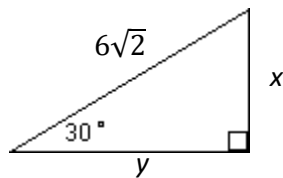
16) Find x . No calculator!



17) Find x and y . No calculator.

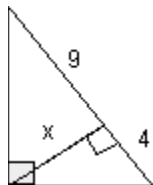


18) Find x and y . No calculator.

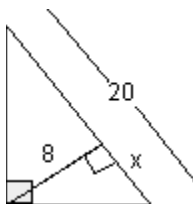


For # 19 – 21: Solve for the variables (no calculator). If needed, leave answers in radical form.

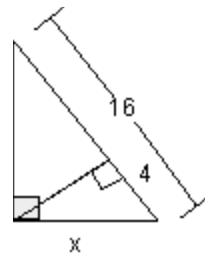
19.



20.



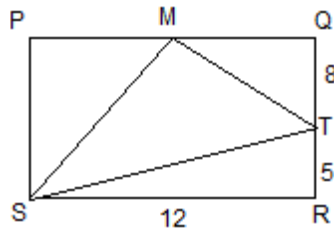
21.



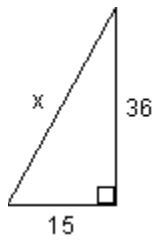
22. If Captain Jack Sparrows' treasure map reads that to find the treasure ye must walk 6 paces north from the stump, 12 paces west, 10 paces north, and 18 paces west. How far from the stump is the treasure?

23. Classify a triangle with sides of length 5, 11, and 13 as acute, right, or obtuse.

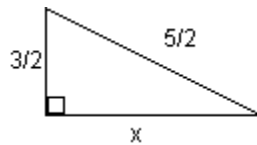
24. M is the midpoint of a side of rectangle PQRS. Find the perimeter of $\triangle MST$. No calculator.



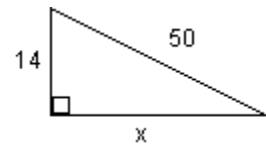
25.



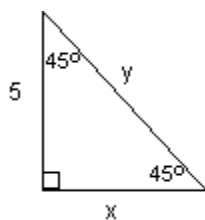
26.



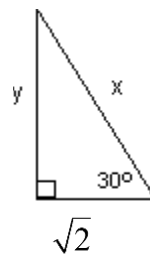
27.



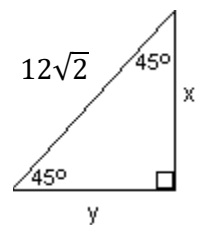
28.

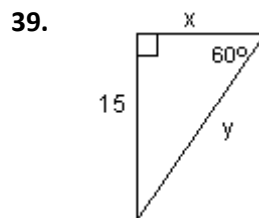
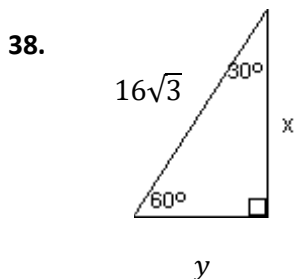
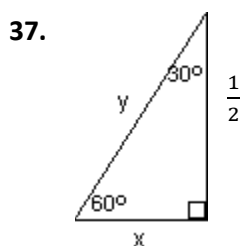
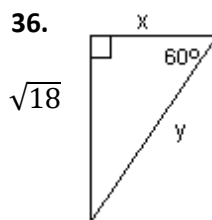
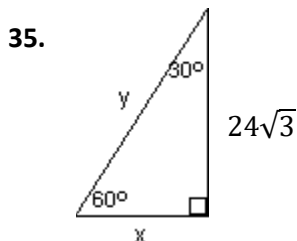
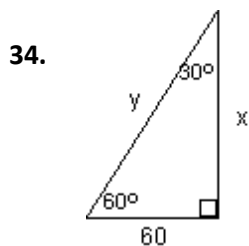
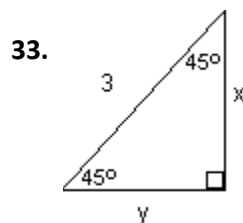
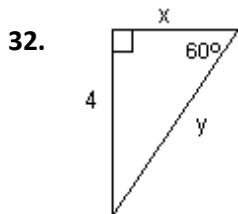
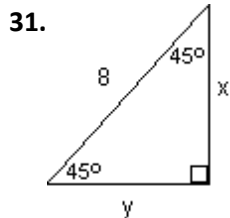


29.



30.





Answers:

1) No, he is not correct. The distance from the first aid station to the campground is 1.21 miles. Work must be shown!

2) D, E, H

3) $s - r$

4) $\approx 15\text{ m}$

5) $\approx 81\text{ ft}$

6) $\cong 9\text{ ft}$

7) $x = 4.83; y = 6.95$

8) $x = 58.21^\circ$

9) $x = 37.86; y = 65^\circ$

10) $x = 61.93^\circ; y = 15$

11) 26.38

12) 54.89°

13) 10

14) $x = 4\sqrt{2}; y = 4\sqrt{6}$

15) $4\sqrt{2}$

16) $\sqrt{7}$

17) $x = y = 11\sqrt{2}$

18) $x = 3\sqrt{2}; y = 3\sqrt{6}$

19) 6

20) 4, 16

21) 8

22) 34 paces

23) obtuse

24) $23 + \sqrt{205}$

25) 39

26) 2

27) 48

28) $x = 5; y = 5\sqrt{2}$

29) $x = \frac{2\sqrt{6}}{3}; y = \frac{\sqrt{6}}{3}$

30) $x = 12; y = 12$

31) $x = y = 4\sqrt{2}$

32) $x = \frac{4\sqrt{3}}{3}; y = \frac{8\sqrt{3}}{3}$

33) $x = y = \frac{3\sqrt{2}}{2}$

34) $y = 120; x = 60\sqrt{3}$

35) $x = 24; y = 48$

36) $x = \sqrt{6}; y = 2\sqrt{6}$

37) $x = \frac{\sqrt{3}}{6}; y = \frac{\sqrt{3}}{3}$

38) $x = 24; y = 8\sqrt{3}$

39) $x = 5\sqrt{3}; y = 10\sqrt{3}$