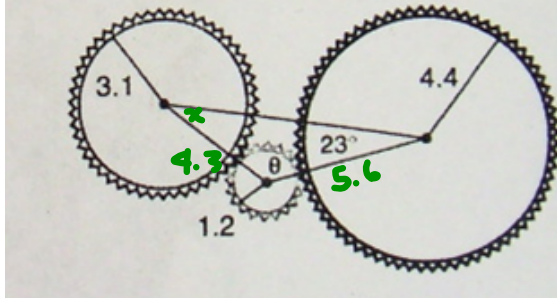


1. Three gears are arranged as shown. Determine the measure of angle θ correct to the nearest degree.



Warm up

$$\frac{\sin 23}{4.3} = \frac{\sin x}{5.6}$$

$$x = 30.6$$

$$\theta = 180 - 30.6 - 23$$

$$\theta = 126^\circ$$

For problems 2 and 3 round your answer to the nearest hundredth.

2. Solve the triangle given $B = 43$, $a = 22$, $b = 17$.



$$h = 15.7 \quad A = 62.96 / 117.04$$

$$C = 75.04 / 1994 \quad c = 24.1 / 8.12$$

$$15.7 < 17 < 22$$

2 Δ s

3. Find the area of a triangle with sides $a = 6$, $b = 12$, $c = 7$.

$$K = 14.95 \text{ u}^2$$

Apr 10-5:56 AM

LOS Word Problem Worksheet answers

- ship to post $A = 4.06$ miles and ship to shore = 2.47 miles
- $AF = 8.06$ miles, $BF = 4.82$ miles
- height = 354.4 ft
- 14,498.01 ft
- 5.77 and 3.12
- 108.6 ft
- 61.7 ft
- 158.9 ft
- 108.8 ft
- 1.64 miles
- $R = 7.76$ mm, $s = 13.4$ mm
- 39.73 ft

More LOS Practice Worksheet

- no triangle
- $A = 38.6$, $B = 105.4$, $b = 26.2$
 $A = 141.4$, $B = 2.6$, $b = 1.2$
- no triangle
- $A = 37.1$, $C = 60.9$, $a = 10.4$
- $A = 99$, $a = 28.3$, $b = 19.1$
- $A = 24.6$, $B = 80.4$, $a = 20.7$
 $A = 5.4$, $B = 99.6$, $a = 4.7$

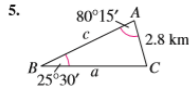
Mar 20-8:19 AM

GO COUGARS!



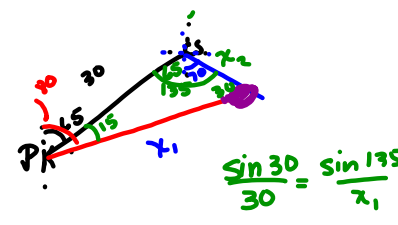
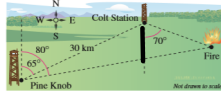
Homework Questions

p 414

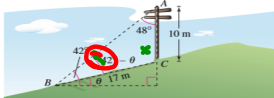


- 11. $A = 110^\circ 15'$, $a = 48$, $b = 16$
- 12. $B = 2^\circ 45'$, $b = 6.2$, $c = 5.8$
- 13. $A = 110^\circ$, $a = 125$, $b = 100$
- 14. $A = 110^\circ$, $a = 125$, $b = 200$
- 15. $A = 76^\circ$, $a = 18$, $b = 20$

31. **Locating a Fire** The bearing from the Pine Knob fire tower to the Colt Station fire tower is N 65° E, and the two towers are 30 kilometers apart. A fire spotted by rangers in each tower has a bearing of N 80° E from Pine Knob and S 70° E from Colt Station. Find the distance of the fire from each tower.



33. **Angle of Elevation** A 10-meter telephone pole casts a 17-meter shadow directly down a slope when the angle of elevation of the sun is 42° (see figure). Find θ , the angle of elevation of the ground.



$$\frac{\sin 48}{17} = \frac{\sin x}{10}$$

In Exercises 43 and 44, use the given values to find (if possible) the values of the remaining four trigonometric functions of θ .

- 43. $\cos \theta = \frac{5}{13}$; $\sin \theta = -\frac{11}{13}$
- 44. $\tan \theta = \frac{2}{9}$; $\csc \theta = -\frac{\sqrt{85}}{2}$

Feb 2-9:51 PM

GO COUGARS! Homework Questions

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32. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

33. **Angle of Elevation** A 10-meter telephone pole casts a 17-meter shadow directly down a slope when the angle of elevation of the sun is 42° (see figure). Find θ , the angle of elevation of the ground.

34. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

35. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

36. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

37. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

38. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

39. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

40. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

41. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

42. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

43. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

44. **Altitude** The angle of elevation from a point on the ground to the top of a tower is 32° . The angle of elevation from another point on the ground to the top of the same tower is 45° . The distance between the two points is 300 feet. How high is the tower?

Feb 2-9:51 PM

HOMEWORK



WB p152 1, 2, 4, 6

WB p 153-154 #2, 3, 5, 6, 8-11

p421 #27, 29

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LOS and LOC Word Problem Answers

1. 57.2 ft
2. 25.6 ft longer, new angle 28.2 degrees
3. 912.4 km
4. 674.5 ft
5. 9.3 in
6. 22 in.
7. 367.25 ft.
8. 218.0 ft.
9. A - 35 mi., B - 65.8 mi.
10. 16 in. and 22 in.
11. about 97 miles, $K = 6946 \text{ mi}^2$
12. 852.1 ft.

Mar 20-9:47 AM