Geometry Trigonometry Test
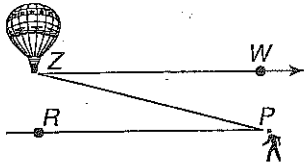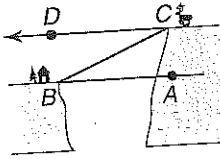
NAME _____

Name the angle of depression or angle of elevation in each figure.
This angle goes from the line of sight.

ANSWERS

1.

2.

1. _____

2. _____

3. _____

4. _____

Express the following as fractions in simplest (reduced) form.

3. sin A   4. cos A

5. tan A   6. Sin B

7. cos B   8. Tan B

Use for Exs. 3 – 8

5. _____

6. _____

7. _____

8. _____

9. _____

Complete the following statements. Find angle measures to the
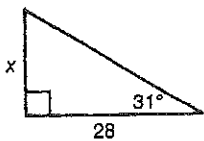nearest degree and the other values to the nearest ten-thousandth.

9. sin 70°≈ _?_   10. cos 32° ≈ _?_   11. tan 14° ≈ _?_

12. sin _?_ ≈ 0.9744   13. cos _?_ ≈ 0.9903

14. tan _?_ ≈ 1.8040

10. _____

11. _____

12. _____

13. _____
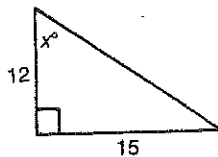
14. _____

Find the value of x. Find the lengths to the tenth and angles
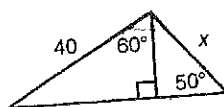to the nearest degree.

15.

16.

15. _____

16. _____

17. _____

18. _____
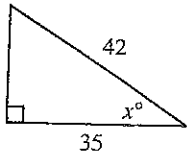
17.
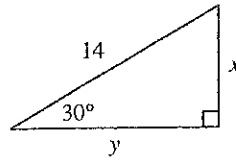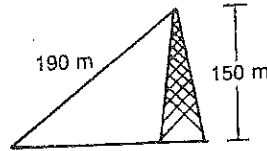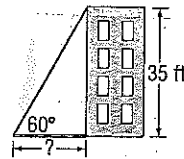

18.

19.

20.

19. _____

20. x = _____

y = _____

21. A support wire is attached to the top of a 150m radio tower. The wire is 190m long. What is the angle that the wire makes with the ground (to the nearest degree)?

21. _____

190 m   150 m

22. Suppose the sun casts a shadow off a 35-foot building. If the angle of elevation to the sun is 60°, how long is the shadow to the nearest tenth of a foot?

22. _____

35 ft

60°

?

23. A woman standing on a cliff at the edge of the ocean spots a raft. Her eye level is 18m above sea level and the angle of depression is 7°. To the nearest 10 m, find the distance from the raft to the base of the cliff. (Make a sketch) and then find the distance. → More than just a triangle!

24. From her position in a hot-air balloon, Angie, can see her car parked in a field. If the angle of depression is 8° and Angie is 38m above the ground, what is the straight-line distance from Angie to her car? (Make a sketch) and then round to the nearest tenth of a meter. → More than just a triangle!
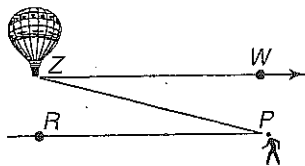
Geometry Trigonometry Test
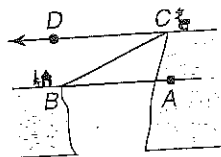
NAME __Key__   (65)

Name the angle of depression or angle of elevation in each figure.   ANSWERS
This angle goes from the line of sight.

1.

2.

Express the following as fractions in simplest (reduced) form.

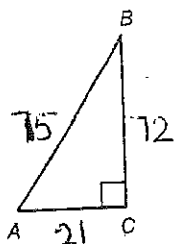3. sin A   4. cos A

5. tan A   6. Sin B

7. cos B   8. Tan B

Use for Exs. 3 – 8

Complete the following statements. Find angle measures to the
nearest degree and the other values to the nearest ten-thousandth.

9. $\sin 70° \approx$ _?_   10. $\cos 32° \approx$ _?_   11. $\tan 14° \approx$ _?_

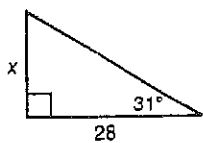12. $\sin$ _?_ ≈ 0.9744 13. $\cos$ _?_ ≈ 0.9903
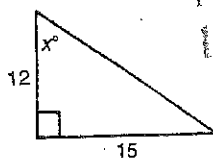
14. $\tan$ _?_ ≈ 1.8040

Find the value of x. Find the lengths to the tenth and angles
to the nearest degree.

15.

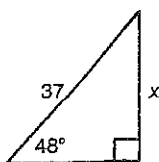$\text{Tan } 31 = \dfrac{x}{28}$

16.

$\text{Tan } X = \dfrac{15}{12}$

17.

$\text{Sin } 48 = \dfrac{x}{37}$

18.

$\text{Cos } 60 = \dfrac{y}{40}$

$y = 20$

$\text{Sin } 50 = \dfrac{20}{x}$

(2) 1. $\angle ZPR$ OR $\angle RPZ$

(2) 2. $\angle DCB$ OR $\angle BCD$

2 each 3. $\dfrac{72}{75} = \dfrac{24}{25}$

4. $\dfrac{21}{75} = \dfrac{7}{25}$

5. $\dfrac{72}{21} = \dfrac{24}{7}$

6. $\dfrac{21}{75} = \dfrac{7}{25}$

7. $\dfrac{72}{75} = \dfrac{24}{25}$

8. $\dfrac{21}{72} = \dfrac{7}{24}$

9. $.9397$

10. $.8480$

11. $.2493$

12. $77°$

13. $8°$

14. $61°$

(3) 15. 16.8

(2) 16. $51°$

(3) 17. 27.5

(3) 18. 26.1

I Correct
I Round
I work

(40)

19.

42 / 35 / x°

$\cos x = \dfrac{35}{42}$

20.

14 / x / 30° / y
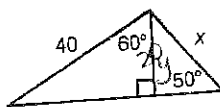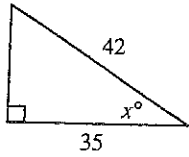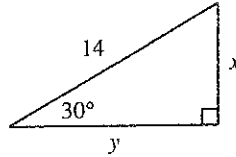
$\sin 30 = \dfrac{x}{14}$

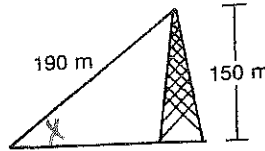$\cos 30 = \dfrac{y}{14}$

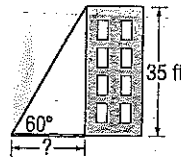(3) 19. ___34°___

(3) 20. x = ___7___

(3) y = ___12.1___

21. A support wire is attached to the top of a 150m radio tower. The wire is 190m long. What is the angle that the wire makes with the ground (to the nearest degree)?

21. ___52°___ (3)
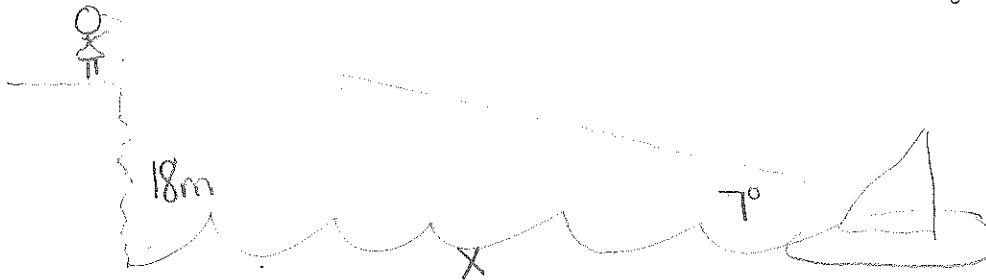

190 m / 150 m / x

$\sin x = \dfrac{150}{190}$

22. Suppose the sun casts a shadow off a 35-foot building. If the angle of elevation to the sun is 60°, how long is the shadow to the nearest tenth of a foot?

22. ___20.2 ft___ (3)

35 ft / 60° / ?

$\tan 60 = \dfrac{35}{x}$

(5) **23.** A woman standing on a cliff at the edge of the ocean spots a raft. Her eye level is 18m above sea level and the angle of depression is 7°. To the nearest 10 m, find the distance from the raft to the base of the cliff. (Make a sketch) and then find the distance. → More than just a triangle!
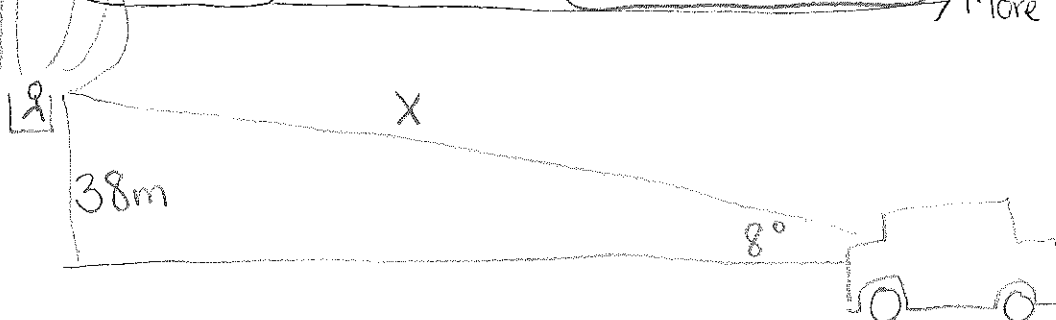

18m / 7° / X

$\tan 7 = \dfrac{18}{x}$

$X = 146.6m$

$= 150m$

(5) **24.** From her position in a hot-air balloon, Angie, can see her car parked in a field. If the angle of depression is 8° and Angie is 38m above the ground, what is the straight-line distance from Angie to her car? (Make a sketch) and then round to the nearest tenth of a meter. → More than just a triangle!

X / 38m / 8°

$\sin 8 = \dfrac{38}{x}$

$X = 273.0m$

(25)