Find the value of each ratio to the nearest ten thousandth.
ex. sin 35° = .5736

1. sin 40° = _____   2. cos 36° = _____   3. tan 15° = _____

4. sin 82° = _____   5. cos 78° = _____   6. tan 63° = _____

Find the measure of each angle to the nearest degree.
ex. sin A = .7586 __49°__

7. sin A = .8365 _____   8. cos B = .3494 _____   9. tan C = .8383 _____

10. sin D = .1334 _____   11. cos E = .0634 _____   12. tan F = 4.4533 _____

Find the trigonometric ratio as a fraction and as a decimal
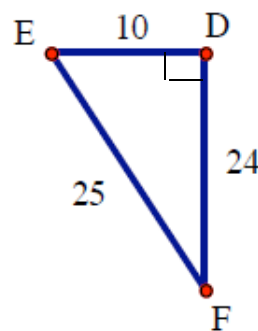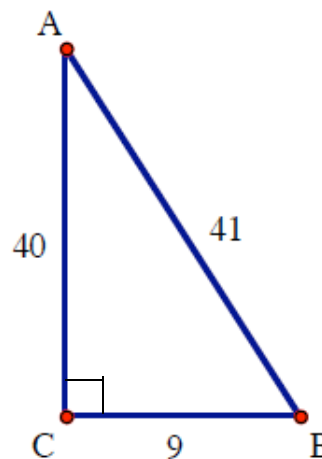**rounded to the nearest ten thousandth.**

	fraction	decimal
13. sin A =		

	fraction	decimal
14. cos F =		

	fraction	decimal
15. tan B =		

	fraction	decimal
16. sin E =		

	fraction	decimal
17. cos A =		
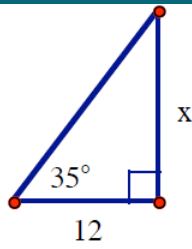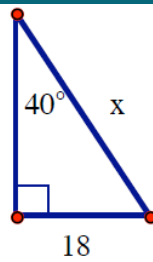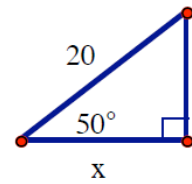
A

40   41

C   9   B

E   10   D

25   24

F

1

18.

x

35°

12

equation

x = _____

19.

40°   x

18

equation

x = _____

20.

20

50°

x

equation

x = _____

21.

16   34°

x

equation

x = _____

22.

24

x

20°

equation

x = _____

23.

14

25°

x

equation

x = _____

24.

15

x

8

equation

x = _____

25.
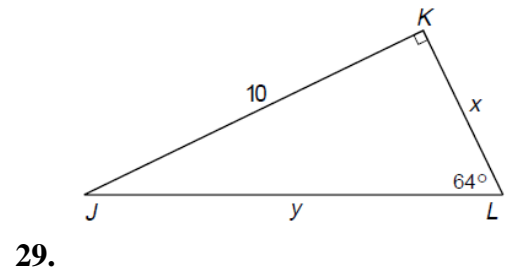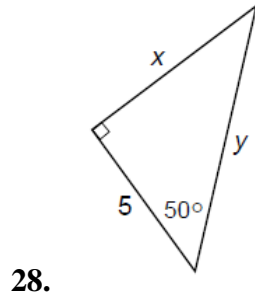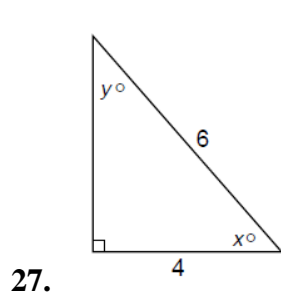
x

16

13

equation

x = _____

26.

25

8

x
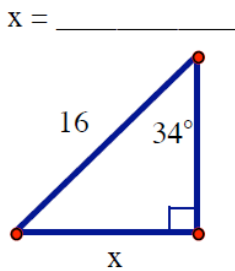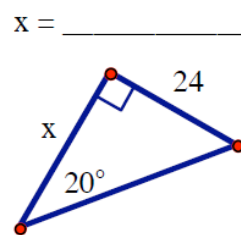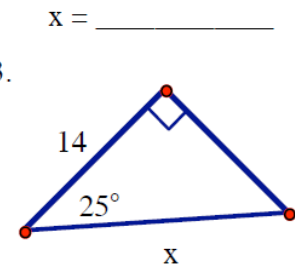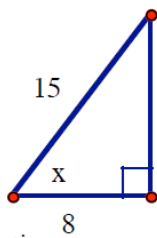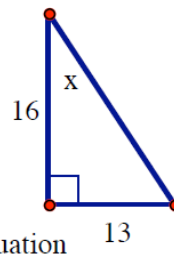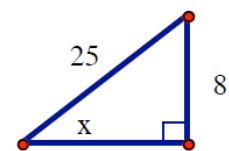
equation

x = _____

Find the values of x and y. Round to the nearest tenth.

27.

28.

29.

Solve each problem. Round measures of segments to the nearest hundredth and measures of angles to the nearest degree.

30. A tree 50 feet high casts a shadow 66 feet long. Find the measure of the angle of elevation of the sun.

(I) sketch

(II) equation

(III) answer _____

31. A balloon on a 30 foot string makes an angle of 50° with the ground. How high above the ground is the balloon if the person holding the balloon is 6 feet tall?

(I) sketch

(II) equation

(III) answer _____

3

32. A 30 foot ladder leans against a building making an angle with the ground of 42°. What is the height the ladder reaches up the building?

(I) sketch　　　　　　　　　　　**(II) equation**　　　**(III) answer _____**

33. A boat in the water is 300 feet from the base of a lighthouse. The distance to the top of the lighthouse is 700 feet. Find the angle of elevation from the boat to the top of the lighthouse.

(I) sketch　　　　　　　　　　　**(II) equation**　　　**(III) answer _____**

34. An airplane, 50 meters above ground, is attempting to land. The planes angle of depression is 80°. Find the ground length the plane is from landing.

(I) sketch　　　　　　　　　　　**(II) equation**　　　**(III) answer _____**

4