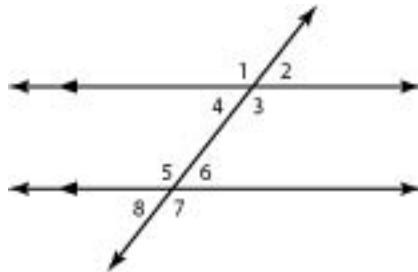


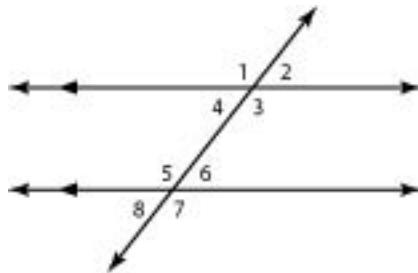
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Directions: When working each of the following questions, be sure to show all work.

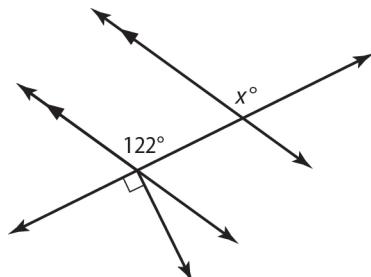
- 1) What is  $m\angle 7$  if  $m\angle 3 = 120^\circ$ ?



- 2) If  $m\angle 6 = 70^\circ$ , what is  $m\angle 1$ ?

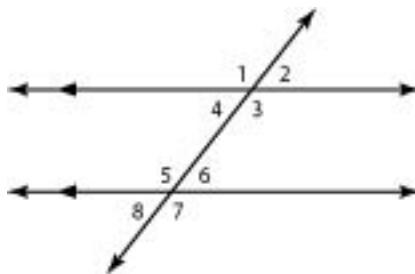


- 3) Determine the value of  $x$  in the figure shown below.

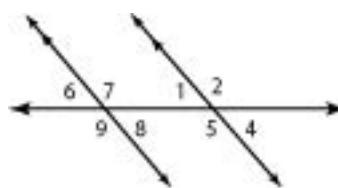


4) In the figure shown, identify one pair of angles that are congruent.

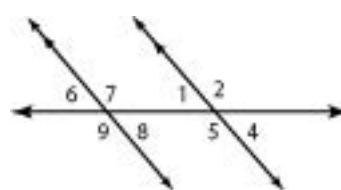
- a)  $m\angle 1$  and  $m\angle 2$
- b)  $m\angle 3$  and  $m\angle 4$
- c)  $m\angle 6$  and  $m\angle 4$
- d)  $m\angle 8$  and  $m\angle 3$



5) What is  $m\angle 6$  if  $m\angle 1 = 50^\circ$ ?



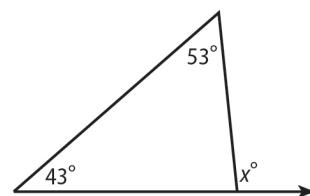
6) If  $m\angle 7 = 130^\circ$ , what is  $m\angle 5$ ?



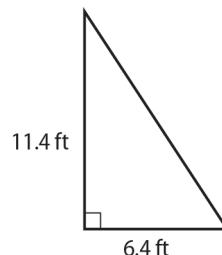
7)  $\angle A$  and  $\angle B$  are alternate exterior angles formed by two parallel lines cut by a transversal. Find  $m\angle B$  if  $m\angle A = 72^\circ$ .

8) A triangle has angles measuring  $43^\circ$  and  $67^\circ$ . What is the measure of the triangle's third angle?

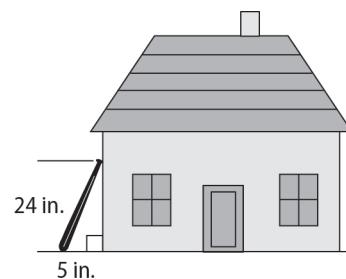
9) Determine the value of  $x$  in the triangle shown below.



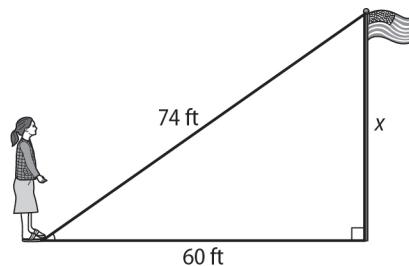
- 10) Determine the length of the hypotenuse in the right triangle shown below. Round to the nearest tenth.



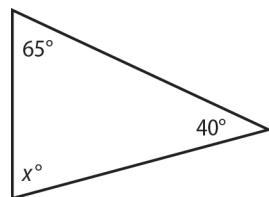
- 11) How far up on the playhouse is the baseball bat resting? Round to the nearest tenth if necessary.



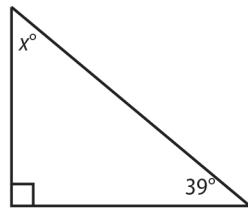
- 12) Determine the height of the flagpole. Round to the nearest tenth if necessary.



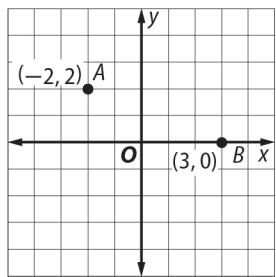
- 13) Determine the value of  $x$ .



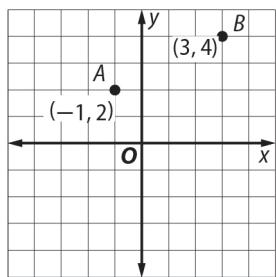
14) Determine the value of  $x$



15) Determine the distance between points  $A$  and  $B$ . Round to the nearest tenth if necessary.



16) Determine the distance between points  $A$  and  $B$ . Round to the nearest tenth if necessary.

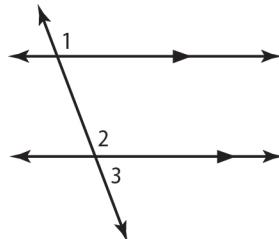


17) One leg of a right triangle measures 6 centimeters, and its hypotenuse has a length of 10 centimeters. Determine the measure of the unknown leg.  
(hint: draw a picture)

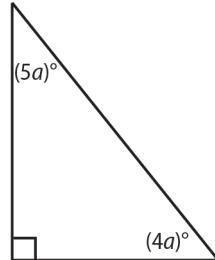
**18)** Determine which three measures could be the side measures of a right triangle.

- a) 3, 4, 5
- b) 6, 8, 9
- c) 9, 12, 16
- d) 12, 16, 24

**19)** If  $m\angle 1 = (2x + 45)^\circ$  and  $m\angle 3 = (3x - 20)^\circ$ , what is  $m\angle 2$ ?



**20)** Determine the value of  $a$  in the triangle shown below.



**21)** Determine the perimeter of a rectangle with diagonal length 15 inches and width 12 inches?

					*		
(+)	0	0	0	0	0	0	0
(-)	1	1	1	1	1	1	1
(2)	2	2	2	2	2	2	2
(3)	3	3	3	3	3	3	3
(4)	4	4	4	4	4	4	4
(5)	5	5	5	5	5	5	5
(6)	6	6	6	6	6	6	6
(7)	7	7	7	7	7	7	7
(8)	8	8	8	8	8	8	8
(9)	9	9	9	9	9	9	9