Worksheet #2 Geometry – F11   Name _____
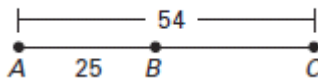
Segment & Angle Addition

Use the Segment Addition Postulate to find the indicated length.
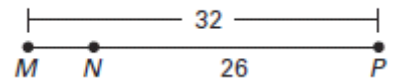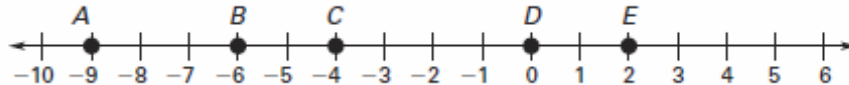
1. Find RT.   2. Find BC.   3. Find MN.

R ——17—— S —8.5— T

|———— 54 ————|
A   25   B   C

|———— 32 ————|
M   N   26   P

Use the number line to find the indicated distance.

$$A \quad B \quad C \quad\quad D \quad E$$

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6

4. $AB =$ 5. $BD =$ 6. $CE =$ 7. $DE =$

Find the indicated length.

8. Find AC

|——— $4x + 4$ ———|
A   14   B $3x - 4$ C
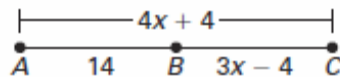
Point J is between H and K on $\overline{HK}$. Use the given information to write an equation in terms of x. Solve the equation. Then find HJ and JK.

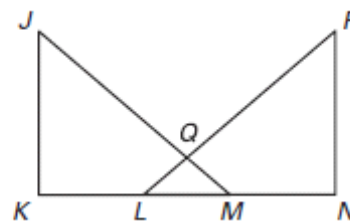9. $HJ = 2x$
   $JK = 3x$
   $KH = 25$

Give another name for the angle in the diagram. Tell whether the angle appears to be acute, obtuse, right, or straight.

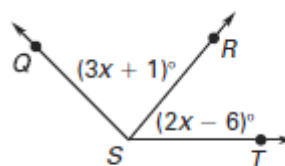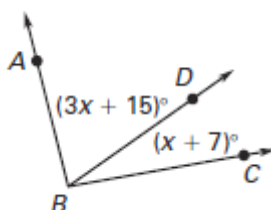10. $\angle JKN$ 11. $\angle KMN$

12. $\angle PQM$ 13. $\angle JML$

Use the given information to find the indicated angle measure.

14. Given $m\angle ABC = 94°$, find $m\angle CBD$.   15. Given $m\angle QST = 135°$, find $m\angle QSR$.

$(3x + 15)°$
$(x + 7)°$

$(3x + 1)°$
$(2x - 6)°$

∠ 1 and ∠2 are complementary angles and ∠ 2 and ∠ 3 are supplementary angles. Given the measures of ∠ 1, find *m∠* 2 and *m∠* 3.

16. *m∠* 1 = 80°   17. *m∠* 1 = 33°   18. *m∠* 1 = 72°   19. *m∠* 1 = 7°

Find *m∠ ABC* and *m∠ CBD*.

20.
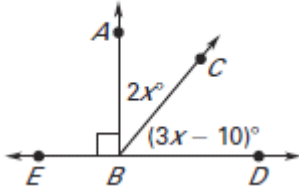
21.
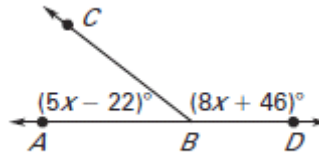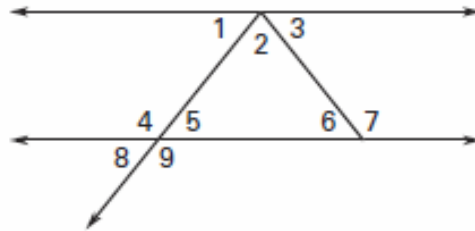

In Exercises 22 – 25, use the diagram. Tell whether the angles are vertical angles, a linear pair, adjacent, or neither.

22. ∠1 and ∠3

23. ∠2 and ∠3

24. ∠4 and ∠5

25. ∠5 and ∠8

26. The measure of one angle is three times the measure of its complement. Find the measure of each angle.

27. Two angles form a linear pair. The measure of one angle is 8 times the measure of the other angle. Find the measure of each angle.

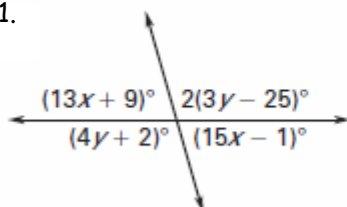**Tell whether the statement is always, sometimes, or never true.**

28. Two complementary angles form a linear pair.

29. The supplement of an obtuse angle is an acute angle.

30. An angle that has a supplement also has a complement.

Find the value of the variables and the measure of each angle in the diagrams.

31.

32.