1-2 to 1-5 Review

Name_____
Date_____Block_____

1. _____B_____ Name the vertex of ∠EBA.

2. _____∠EBD_____ Give another name for ∠2.

3. _____$\overrightarrow{DE}$ & $\overrightarrow{DB}$_____ What are the sides of ∠BDE?

4. _____$\overrightarrow{BD}$_____ Name the common side of ∠2 and ∠3.

5. _____$\overrightarrow{BA}$ & $\overrightarrow{BF}$_____ Name a pair of opposite rays.

6. _____∠1,∠2,∠EBF_____ Name 3 angles with ray $\overrightarrow{DE}$ as a side. (BE)

7. _____E_____ Name a point in the interior of ∠DBA.

8. _____∠2 ≅ ∠3_____ If ray BD bisects ∠EBF, then what 2 angles are congruent?

9. _____EBF_____ Using the angle addition postulate, finish: m∠EBD + m∠DBF = m∠___?

10. _____7.7_____ If $\overrightarrow{BD}$ bisects ∠EBF, m∠DBF = (2x – 34)°, m∠EBD = (8x – 12)°,
find x.

$$8x-12=2x+34$$
$$6x=46$$
$$x=7.6$$
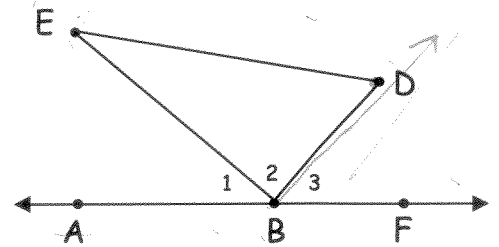
11. _____36°_____ If m∠EBD = (5x + 4)°, m∠DBF = (3x – 15)°, and
m∠EBF = 125°, find m∠DBF.

$$5x+4+3x-15=125 \qquad 3(17)-15$$
$$8x-11=125$$
$$8x=136$$
$$x=17$$
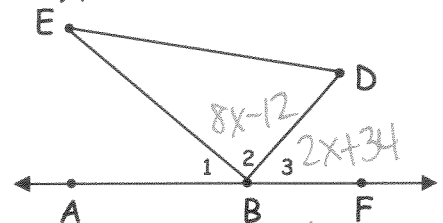
12. _____124°_____ If m∠ABE = 4x° and m∠EBF = (5x + 54)°, find m∠EBF.

$$4x+5x+54=180$$
$$9x+54=180 \qquad 5(14)+54$$
$$9x=126 \qquad 124$$
$$x=14$$
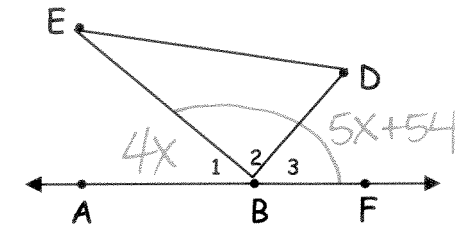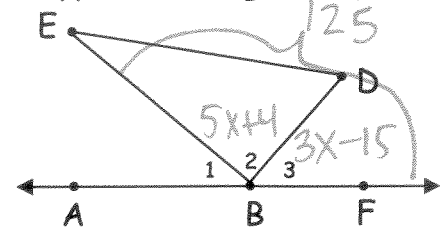
For # 13-16, use the coordinates A(-4,0), B(4,0), C(6,-2), and D(-4,-2) to solve each problem.

13. The coordinates of the midpoint (M) of $\overline{AC}$.   M = __(1,-1)__

$$\left(\frac{-4+6}{2}, \frac{0+-2}{2}\right)$$

14. Find the distance of AM, and MC.   AM = __$\sqrt{26}$__

$$AM=\sqrt{(-4-1)^2+(0-(-1))^2}=\sqrt{(-5)^2+(1)^2}=\sqrt{25+1}=\sqrt{26}$$
$$MC=\sqrt{(6-1)^2+(-2-(-1))^2}=\sqrt{(5)^2+(-1)^2} \quad \sqrt{25+1}=\sqrt{26}$$

MC = __$\sqrt{26}$__

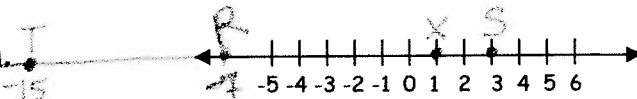15. Explain why segments $\overline{AM}$ and $\overline{MC}$ are congruent. __they are both $\sqrt{26}$__

16. Find the coordinates of X if D is the midpoint of $\overline{BX}$.   X = __(-12,-4)__

$$\underset{(4,0)}{\overset{B}{\bullet}} \quad \underset{(-4,-2)}{\overset{D}{\bullet}} \quad \underset{(x,y)}{\overset{X}{\bullet}}$$

$$\frac{4+x}{2}=-4 \qquad \frac{0+y}{2}=-2$$
$$4+x=-8 \qquad y=-4$$
$$x=-12$$

Use the number line to answer each.

Given: R = -7, S = 3, T = -15, X = 1

17. RS = __10__.   RS = |3-(-7)| = |10| = 10

18. ST = __18__.   ST = |3-(-15)| = |18| = 18

19. The coordinate of the midpoint of $\overline{TX}$ is __-7__. $\frac{-15+1}{2} = \frac{-14}{2}$

$-15+x = -14$
$+15 \quad +15$
$(x = 1)$

$\frac{-15+x}{2} = -7$

20. If R is the midpoint of segment $\overline{TB}$, then the coordinate of B is __1__.

If R is between T and Y, and TR = 3x + 7, RY = x - 21, and TY = 102, find the following. Draw a picture and label the parts.

21. x = __29__

22. TR = __94__   3(29)+7 =
87+7

23. RY = __8__   29-21 =

3x+7+x-21=102
4x-14=102
4x=116
x=29

Draw a picture of each pair of angles in the chart below.

	Picture		Picture
24. Opposite rays $\vec{AB}$ & $\vec{AC}$		28. Adjacent complementary angles ∠5 & ∠6	
25. Obtuse angle ∠RST		29. Nonadjacent complementary angles ∠7 & ∠8	
26. Linear pair ∠1 & ∠2		30. Adjacent supplementary angles ∠9 & ∠10	
27. Vertical angles ∠3 & ∠4		31. Non-adjacent supplementary angles ∠11 & ∠12	