

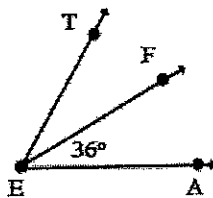
Angles Test Review

Name: HIRSCH

Period: _____ Date: _____

For Questions 1 - 2, EF is the angle bisector of $\angle TEA$.

- Find the measure of $\angle TEF$ 36°
- Find the measure of $\angle TEA$ 72°



For Questions 3 - 4, BD bisects $\angle ABC$. Find the value of x.

3. $(6x + 15)^\circ$ $(3x + 30)^\circ$

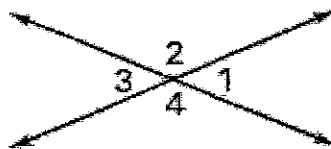
$$\begin{array}{r} 6x + 15 = 3x + 30 \\ -3x \quad -3x \\ \hline 3x + 15 = 30 \\ -15 \quad -15 \\ \hline 3x = 15 \\ \frac{3x}{3} = \frac{15}{3} \quad x = 5 \end{array}$$

4. $(10 - x)^\circ$ $(42 - 5x)^\circ$

$$\begin{array}{r} 10 - x = 42 - 5x \\ +5x \quad +5x \\ \hline 10 + 4x = 42 \\ -10 \quad -10 \\ \hline 4x = 32 \\ \frac{4x}{4} = \frac{32}{4} \\ x = 8 \end{array}$$

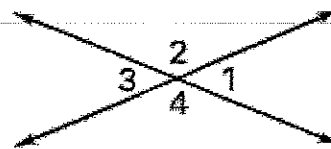
For Questions 5 - 7, use the diagram to solve for the missing angle measure.

- If $m\angle 1 = 30^\circ$, then $m\angle 3 = 30^\circ$
- If $m\angle 2 = 100^\circ$, then $m\angle 1 = 80^\circ$
- If $m\angle 4 = 110^\circ$, then $m\angle 2 = 110^\circ$



For Questions 8 - 10, state whether the given angles are a linear pair or are vertical angles.

- $\angle 2$ and $\angle 1$ linear pair
- $\angle 4$ and $\angle 2$ vertical
- $\angle 1$ and $\angle 3$ vertical



For Questions 11 - 12, Find the values of y.

11. $(4x + 18)^\circ$ $(6x + 32)^\circ$

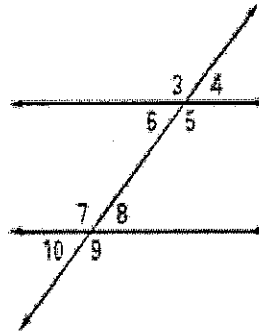
$$\begin{array}{r} 4x + 18 + 6x + 32 = 180 \\ 10x + 50 = 180 \\ -50 \quad -50 \\ \hline 10x = 130 \\ \frac{10x}{10} = \frac{130}{10} \\ x = 13 \end{array}$$

12. $(4x + 1)^\circ$ $(6x - 7)^\circ$

$$\begin{array}{r} 4x - 7 = 4x + 1 \\ -4x \quad -4x \\ \hline -7 = 1 \\ +7 \quad +7 \\ \hline 2x = 8 \\ \frac{2x}{2} = \frac{8}{2} \\ x = 4 \end{array}$$

In exercises 13 – 18, use the diagram to complete the statement with corresponding, alternate interior, alternate exterior, or consecutive interior.

13. $\angle 6$ and $\angle 5$ are linear pairs angles.
14. $\angle 4$ and $\angle 8$ are corresponding angles.
15. $\angle 6$ and $\angle 7$ are consec. int angles.
16. $\angle 7$ and $\angle 5$ are alt. interior angles.
17. $\angle 3$ and $\angle 9$ are alt. exterior angles.
18. $\angle 3$ and $\angle 5$ are vertical angles.



In exercises 19 – 26, solve for x.

19.

$$\begin{aligned}
 5x + 2 + 53 &= 180 \\
 5x + 55 &= 180 \\
 -55 & \quad -55 \\
 \hline
 5x &= 125 \quad x = 25
 \end{aligned}$$

20.

$$\begin{aligned}
 80 &= 5x - 15 \\
 +15 & \quad +15 \\
 \hline
 95 &= 5x \quad x = 19
 \end{aligned}$$

21.

$$\begin{aligned}
 5x - 25 + 3x + 9 &= 180 \\
 8x - 16 &= 180 \\
 +16 & \quad +16 \\
 \hline
 8x &= 196 \\
 \frac{8x}{8} & \quad \frac{196}{8} \\
 x &= 24.5
 \end{aligned}$$

22.

$$\begin{aligned}
 x + 83 &= 180 \\
 -83 & \quad -83 \\
 \hline
 x &= 97
 \end{aligned}$$

23.

$$\begin{aligned}
 x - 8 &= 55 \\
 +8 & \quad +8 \\
 \hline
 x &= 63
 \end{aligned}$$

24.

$$\begin{aligned}
 48 &= 4x \\
 \frac{48}{4} & \quad \frac{4x}{4} \\
 x &= 12
 \end{aligned}$$

25.

$$\begin{aligned}
 7x + 14 &= 8x + 6 \\
 -7x & \quad -7x \\
 \hline
 14 &= x + 6 \\
 -6 & \quad -6 \\
 \hline
 8 &= x
 \end{aligned}$$

26.

$$\begin{aligned}
 11x - 2 &= 130 \\
 +2 & \quad +2 \\
 \hline
 11x &= 132 \\
 \frac{11x}{11} & \quad \frac{132}{11} \\
 x &= 12
 \end{aligned}$$