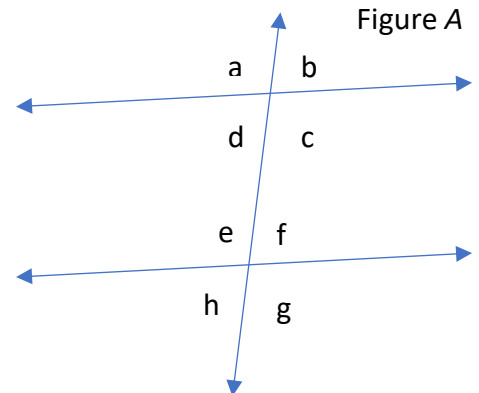


Parallel Lines and Transversals

Use Figure A for #1-6. Identify the following pairs of angles with their correct description from the word bank.

Corresponding Angles	Consecutive Interior Angles
Alternate Interior Angles	Alternate Exterior Angles
Vertical Angles	Linear Pair

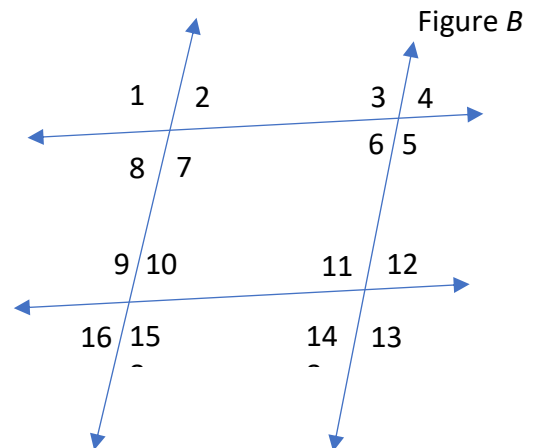
- | | |
|----------------------------|----------------------------|
| 1) $\angle a$ & $\angle g$ | 4) $\angle d$ & $\angle h$ |
| 2) $\angle d$ & $\angle f$ | 5) $\angle a$ & $\angle d$ |
| 3) $\angle e$ & $\angle g$ | 6) $\angle c$ & $\angle f$ |



Use Figure B for #7-12. Identify the following pairs of angles with their correct description from the word bank.

Corresponding Angles	Consecutive Interior Angles
Alternate Interior Angles	Alternate Exterior Angles
Vertical Angles	Linear Pair

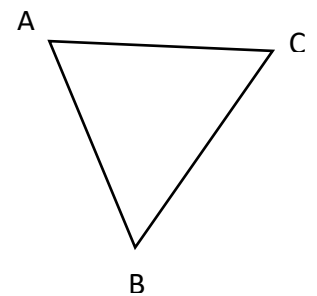
- | | |
|------------------------------|-------------------------------|
| 7) $\angle 12$ & $\angle 16$ | 10) $\angle 9$ & $\angle 15$ |
| 8) $\angle 1$ & $\angle 9$ | 11) $\angle 14$ & $\angle 15$ |
| 9) $\angle 5$ & $\angle 6$ | 12) $\angle 3$ & $\angle 7$ |



- 13) If $\overline{AC} \cong \overline{BC}$, identify the vertex angle and the base angles.

a. Vertex angle

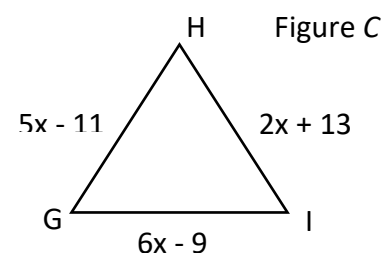
b. Base Angles:



For #14-15, use Figure C.

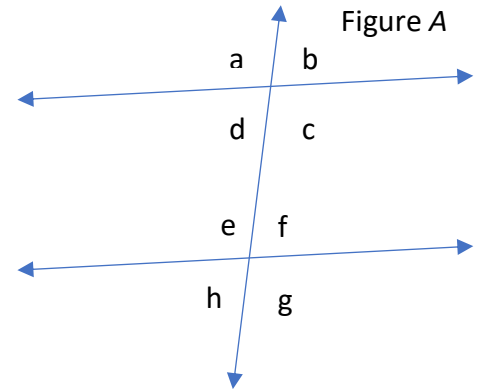
- 14) If $\triangle GHI$ is an isosceles triangle with $\angle H$ as the vertex angle, find x .

- 15) Find the perimeter of $\triangle GHI$.



Parallel Lines and Transversals (Key)

Use Figure A for #1-6. Identify the following pairs of angles with their correct description from the word bank.

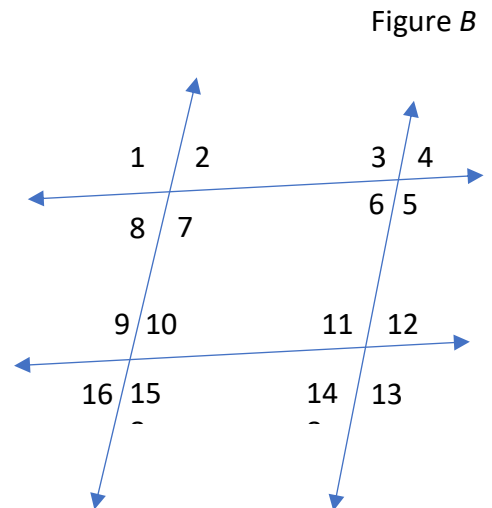


Corresponding Angles
Alternate Interior Angles
Vertical Angles

Consecutive Interior Angles
Alternate Exterior Angles
Linear Pair

- 1) $\angle a$ & $\angle g$ **alternate exterior** 4) $\angle d$ & $\angle h$ **corresponding**
 2) $\angle d$ & $\angle f$ **alternate interior** 5) $\angle a$ & $\angle d$ **linear pair**
 3) $\angle e$ & $\angle g$ **vertical angles** 6) $\angle c$ & $\angle f$ **consecutive interior**

Use Figure B for #7-12. Identify the following pairs of angles with their correct description from the word bank.



Corresponding Angles
Alternate Interior Angles
Vertical Angles

Consecutive Interior Angles
Alternate Exterior Angles
Linear Pair

- 7) $\angle 12$ & $\angle 16$ **alternate exterior** 10) $\angle 9$ & $\angle 15$ **vertical angles**
 8) $\angle 1$ & $\angle 9$ **corresponding** 11) $\angle 14$ & $\angle 15$ **consecutive interior**
 9) $\angle 5$ & $\angle 6$ **linear pair** 12) $\angle 3$ & $\angle 7$ **alternate interior**

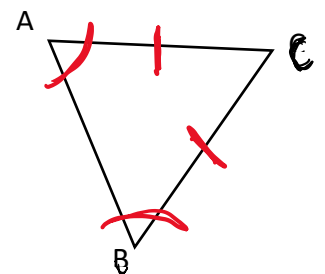
- 13) If $\overline{AC} \cong \overline{BC}$, identify the vertex angle and the base angles.

a. Vertex angle

$\angle C$

b. Base Angles:

$\angle A$ & $\angle B$



For #14-15, use Figure C.

- 14) If $\triangle GHI$ is an isosceles triangle with $\angle H$ as the vertex angle, find x.

8

$$x = 8$$

- 15) Find the perimeter of $\triangle GHI$.

97

$$\text{Perimeter} = 29 + 29 + 39 = 97$$

$$\begin{aligned} 5x - 11 &= 2x + 13 \\ -2x & \quad -2x \\ 3x - 11 &= 13 \\ +11 & \quad +11 \\ 3x &= 24 \\ \frac{3x}{3} &= \frac{24}{3} \\ x &= 8 \end{aligned}$$

$$\begin{aligned} 5(8) - 11 &= 29 \\ 40 - 11 &= 29 \end{aligned}$$

$$\begin{aligned} 2x + 13 &= 2(8) + 13 \\ &= 16 + 13 \\ &= 29 \end{aligned}$$

$$\begin{aligned} 6x - 9 &= 6(8) - 9 \\ 48 - 9 &= 39 \end{aligned}$$

