List ALL of the alternate interior angles.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Alternate Interior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. List ALL of the alternate exterior angles.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Alternate Exterior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. List ALL of the same side interior angles. 4) List ALL of the corresponding angles.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Same Side Interior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Corresponding Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. List ALL of the vertical angles. 6) List ALL of the linear pairs.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

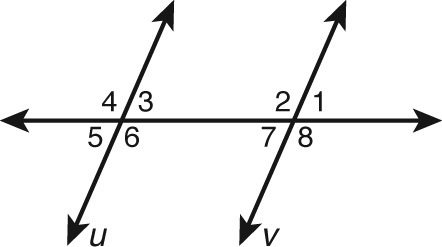
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Vertical Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Linear Pairs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. When you are proving that 2 lines are parallel, circle the theorems that are needed.

a)Linear Pair b) Alternate Interior Angles c) Vertical Angles

d) Corresponding Angles e) Alternate Exterior Angles f) Same Side Interior Angles

8) Find each angle measure given the diagram to the right. The measure of is 89°.

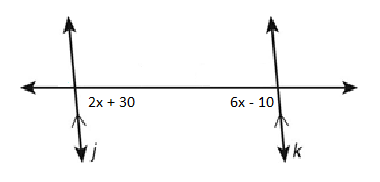
a) <1: \_\_\_\_\_\_\_ b) <2: \_\_\_\_\_\_\_\_

c) <4: \_\_\_\_\_\_\_ d) <5: \_\_\_\_\_\_\_\_

e) <6: \_\_\_\_\_\_\_ f) <7: \_\_\_\_\_\_\_\_

g) <8: \_\_\_\_\_\_\_

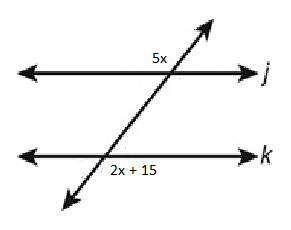
**Use the picture below to answer the following questions.**

**

9)a) What type of angles are these? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) What is the value of x? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) What is the value of each angle? \_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_



10) a) What type of angles are these? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) What is the value of x? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) What is the value of each angle? \_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 11) *M* (*x*, *y*)  (*x*4, *y*3)  *A*(3, 10), *B*(6, 4), *C*(1, 4) | 12) *M* (*x*, *y*)  (2*x*, 2*y*)  *P*(1, 3), *Q*(4, 1), *R*(2, 1) |
|  |  |

a) Name the coordinates of the image points: a) Name the coordinates of the image points?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

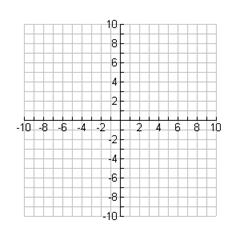
b) State the transformation that took place. b) State the transformation that took place.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13) One of the acute angles in a right triangle measures 34.6°. Let the acute angles be and ,

with  = 34.6°. What is the measure of the other acute angle?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

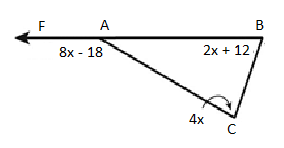
14) Plot the points below and state the transformation.

P(-3, 5), Q(-3, 2), R(-1, 1)

S(3, 5), T(3, 2), U(1, 1)

Transformation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Apply the exterior angle theorem and answer the following questions.**

**

a) Find the value of x. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

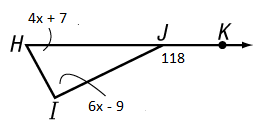
15)

b) Find the m. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) Find the m.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) Find the m. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) Find the m. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16) 

a) Find the value of x. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Find the m. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

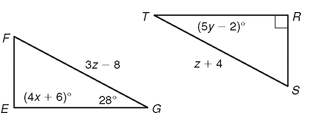
c) Find the m.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) Find the m. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17) Given that polygon . Identify the congruent corresponding part for , , and .

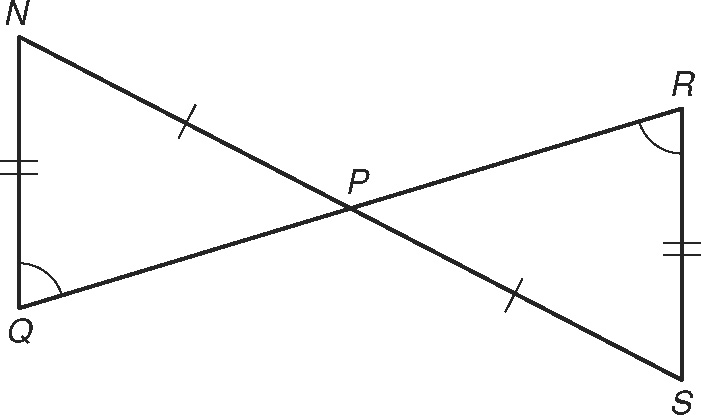
: \_\_\_\_\_\_\_\_\_ : \_\_\_\_\_\_\_\_\_\_ : \_\_\_\_\_\_\_\_\_\_





18) x = \_\_\_\_\_\_\_\_\_\_\_\_\_ 19) y = \_\_\_\_\_\_\_\_\_\_\_\_

20) m: \_\_\_\_\_\_\_\_\_\_\_\_ 21) : \_\_\_\_\_\_\_\_\_\_\_

*Complete the proof.*

**Given:** *Q****R*

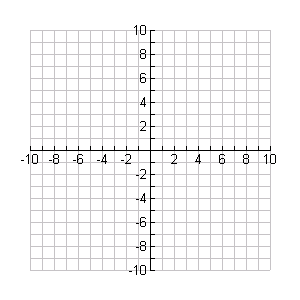
*P* is the midpoint of 

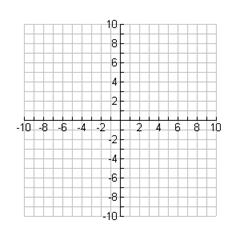


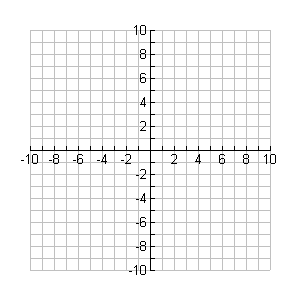
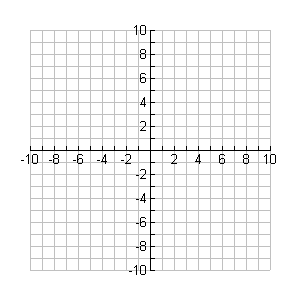
**Prove:** △*NPQ***△*SPR*

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
| *Q*R | Given |
| *NPQ*  *SPR* | 22. a. |
| *N*  *S* | 23. b. |
| *P* is the midpoint of | 24. c. |
| 25. d. | Def. of midpoint. |
|  | 26. e. |
| △*NPQ*  △*SPR* | 27. f. |

28) Graph the given points on the coordinate plane. Prove that the polygons with the given vertices are congruent by using the distance formula.

A(-1, -5), B(-4, -4), C(-1, -2)

D(3, 4), E(6, 3), F(3, 1)



Final Statement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_