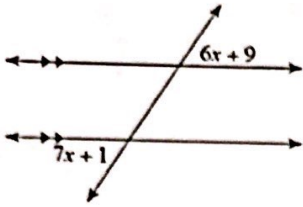


Day 6 – Algebraic Relationships with Parallel Lines Practice

Name the relationship you would use to solve for variable(s). Then solve for each variable.

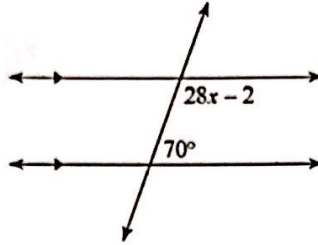
1. alternate exterior



$$6x+9=7x+1$$

$$\boxed{8=x}$$

2. same side interior



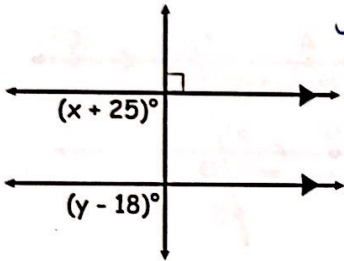
$$28x-2+70=180$$

$$28x+68=180$$

$$28x=112$$

$$\boxed{x=4}$$

3. vertical angles / alternate ext.



vertical \angle 's

$$x+25=90$$

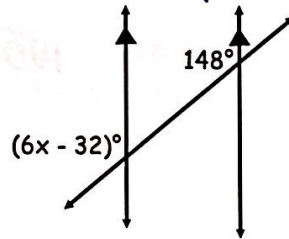
$$\boxed{x=65}$$

alternate ext

$$y-18=90$$

$$\boxed{y=108}$$

4. corresponding

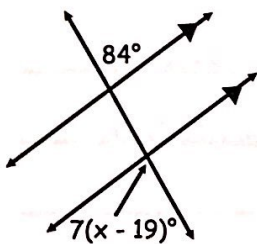


$$6x-32=148$$

$$6x=180$$

$$\boxed{x=30}$$

5. alternate exterior



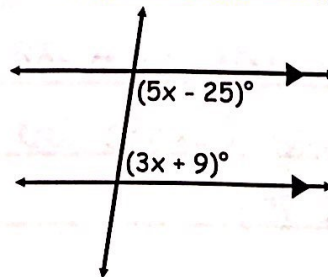
$$7(x-19)=84$$

$$7x-133=84$$

$$7x=217$$

$$\boxed{x=31}$$

6. same side interior



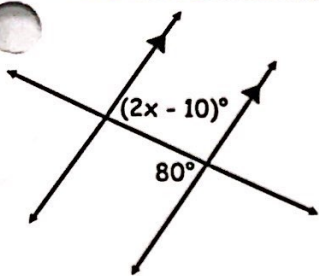
$$5x-25+3x+9=180$$

$$8x-16=180$$

$$8x=196$$

$$\boxed{x=24.5}$$

7. Alternate interior

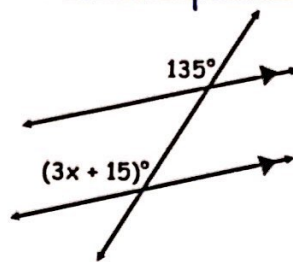


$$2x - 10 = 80$$

$$2x = 90$$

$$\boxed{x = 45}$$

8. Corresponding

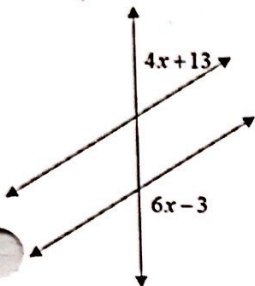


$$3x + 15 = 135$$

$$3x = 120$$

$$\boxed{x = 40}$$

9. Same side exterior



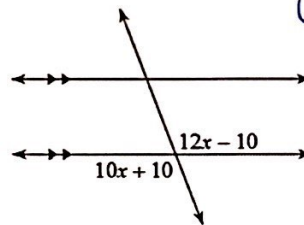
$$4x + 13 + 6x - 3 = 180$$

$$10x + 10 = 180$$

$$10x = 170$$

$$\boxed{x = 17}$$

10. Vertical angles

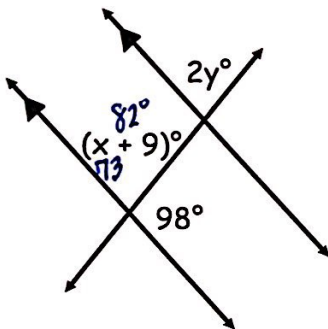


$$12x - 10 = 10x + 10$$

$$2x = 20$$

$$\boxed{x = 10}$$

11. Linear pair / corresponding



Linear Pair

$$x + 9 + 98 = 180$$

$$x + 107 = 180$$

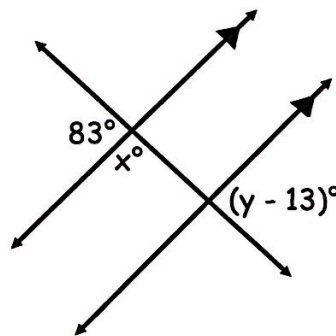
$$\boxed{x = 73}$$

Corresponding

$$2y = 82$$

$$\boxed{y = 41}$$

12. Alternate exterior / linear pair



Alt. Ext

$$y - 13 = 83$$

$$\boxed{y = 96}$$

Linear Pair

$$x + 83 = 180$$

$$\boxed{x = 97}$$