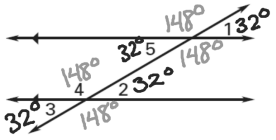
Angles - Short Cut Sheet	
Linear Pairs	Supplementary
Vertical Angles	Congruent
Alternate Interior	Congruent
Alternate Exterior	Congruent
Corresponding	Congruent
Consecutive Interior	Supplementary

* If Congruent: Set equal to each other and solve for x.
* If Supplementary: Add together and set equal to 180. Then solve for x.
* HINT: - If both angles are acute or both angles are obtuse, they are equal.
  - If one angle is big and one is little, they are not equal which means they are supplementary.

Using Properties of Parallel Lines cut by a Transversal:

Use properties of parallel lines to find the angle measures given m∠ 1 = 32°. State your reasoning.



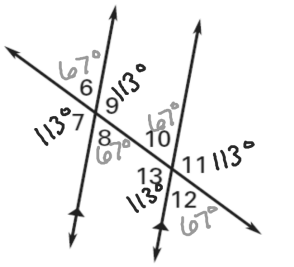
1. m∠2 32°
2. m∠3 32°
3. m∠4 148°
4. m∠5 32°

180 − 32 = 148

Using Properties of Parallel Lines cut by a Transversal:

You Practice:

Use properties of parallel lines to find the angle measures given m∠ 6 = 67°. State your reasoning.

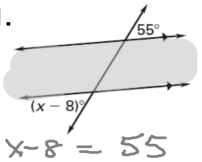


1. m∠7 113°
2. m∠8 67°
3. m∠9 113°
4. m∠10 67°
5. m∠11 113°
6. m∠12 67°
7. m∠13 113°

180 − 67 = 113

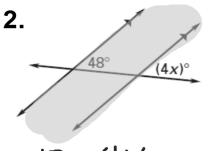
Using Properties of Parallel Lines cut by a Transversal:

Use properties of parallel lines to find the value of x. Also, state your reasoning.

1. 

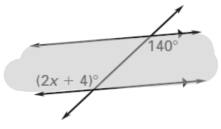
x − 8 = 55
+8 +8
x = 63

x = 63 because alt ext ∠'s are ≅

2. 

48/4 = 4x/4
x = 12

x = 12 because corresponding ∠'s are ≅

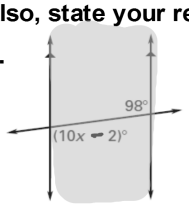
3. 

2x + 4 = 140
−4 −4
2x = 136
2 2
x = 68

x = 68 because alt. int ∠'s are ≅

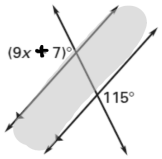
Using Properties of Parallel Lines cut by a Transversal:

Use properties of parallel lines to find the value of x. Also, state your reasoning. You Practice:

4. 

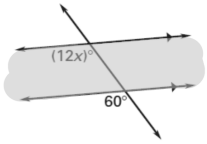
10x − 2 = 98
+2 +2
10x = 100
10 10
x = 10

x = 10 because alt. int. ∠'s are ≅

5. 

9x + 7 = 115
−7 −7
9x = 108
9 9
x = 12

x = 12 because alt ext ∠'s are ≅.

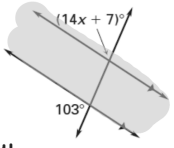
6. 

12x = 60
12 12
x = 5

x = 5 because corresponding ∠'s are ≅

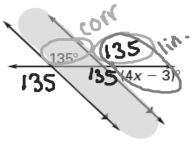
Using Properties of Parallel Lines cut by a Transversal:

Use properties of parallel lines to find the value of x. Also, state your reasoning.

7. 

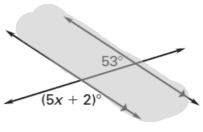
14x + 7 + 103 = 180
14x + 110 = 180
−110 −110
14x = 70
14 14
x = 5

x = 5 because same side ext ∠'s are supp

8. 

4x − 3 + 135 = 180
4x + 132 = 180
−132 −132
4x = 48
4 4
x = 12

x = 12 because (4x−3)° is supp to the corresponding ∠

9. 

x = ____ because