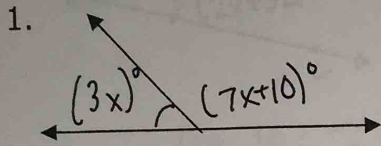


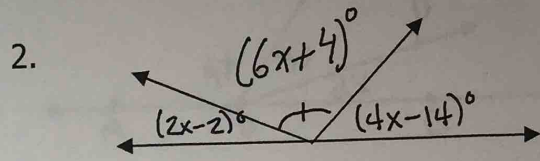
Homework: Classifying Angles

Write the equation and then solve the equation.



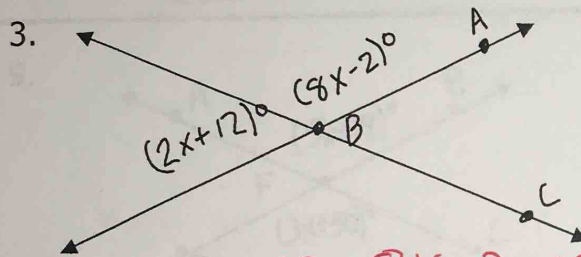
Equation: $3x + 7x + 10 = 180$
 $10x = 170$

$x = 17$



Equation: $2x - 2 + 6x + 4 + 4x - 14 = 180$
 $12x - 12 = 180$
 $12x = 192$

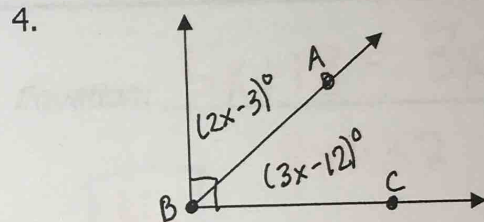
$x = 16$



Equation: $2x + 12 + 8x - 2 = 180$
 $10x + 10 = 180$
 $10x = 170$

$x = 17$

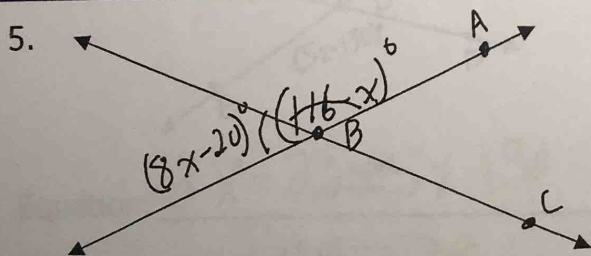
$m\angle ABC = 46^\circ$ $2(17) + 12$



Equation: $2x - 3 + 3x - 12 = 90$
 $5x - 15 = 90$
 $5x = 105$

$x = 21$

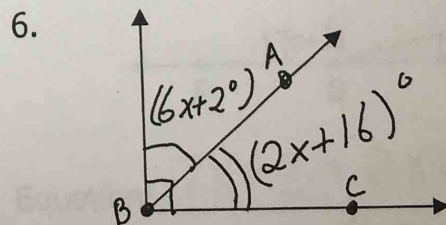
$m\angle ABC = 51^\circ$ $3(21) - 12$



Equation: $8x - 20 + 116 - x = 180$
 $7x + 96 = 180$
 $7x = 84$

$x = 12$

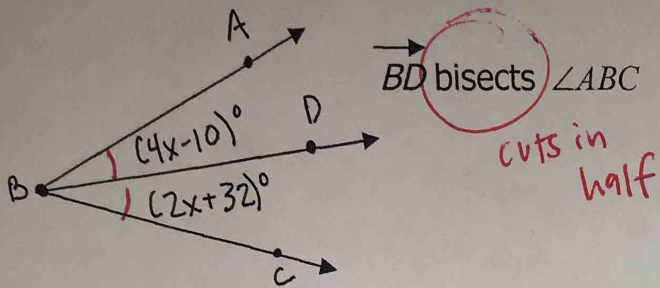
$m\angle ABC = 76^\circ$ $8(12) - 20$



Equation: $6x + 2 + 2x + 16 = 90$
 $8x + 18 = 90$
 $8x = 72$

$x = 9$

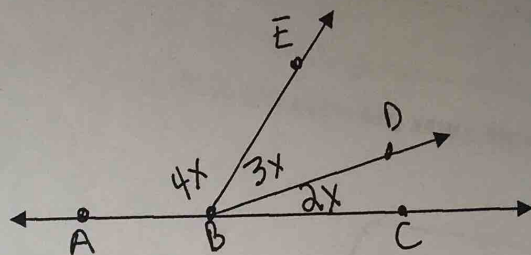
$m\angle ABC = 34^\circ$ $2(9) + 16$



Equation: $4x - 10 = 2x + 32$
 $2x = 42$

$x = \boxed{21}$
 $m\angle ABC = \boxed{148^\circ}$ $4(21) - 10 + 2(21) + 32$

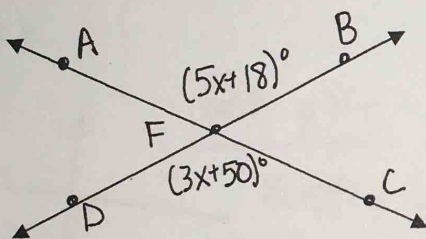
8.



Equation: $4x + 3x + 2x = 180$
 $9x = 180$

$x = \boxed{20}$
 $m\angle EBD = \boxed{60^\circ}$ $3(20)$

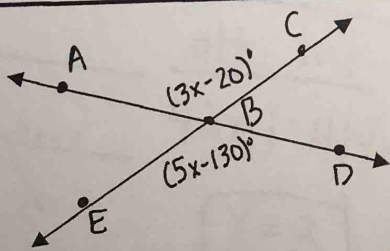
9.



Equation: $5x + 18 = 3x + 50$
 $2x = 32$

$x = \boxed{16}$ $m\angle AFD = \frac{\boxed{82^\circ}}{180 - 98}$
 $m\angle AFB = \boxed{98^\circ}$ $5(16) + 18$
 $m\angle CFD = \boxed{98^\circ}$

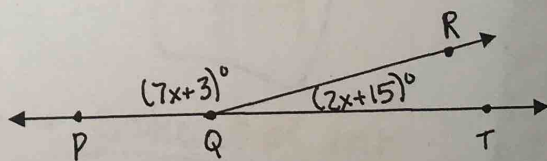
10.



Equation: $3x - 20 = 5x - 130$
 $110 = 2x$

$x = \boxed{55}$
 $m\angle ABC = \boxed{145^\circ}$ $3(55) - 20$
 $m\angle ABE = \boxed{35^\circ}$ $180 - 145$

11.



Equation: $7x + 3 + 2x + 15 = 180$
 $9x + 18 = 180$
 $9x = 162$

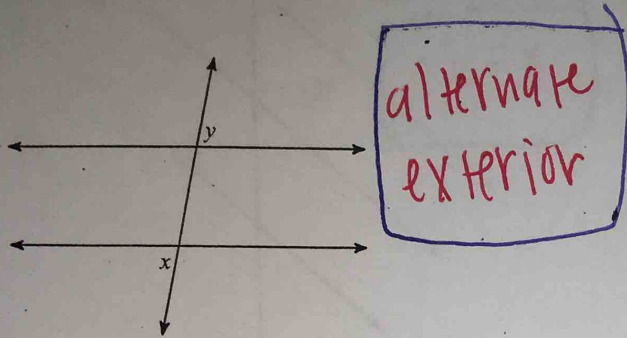
$x = \boxed{18}$
 $m\angle PQR = \boxed{129^\circ}$ $7(18) + 3$
 $m\angle RQT = \boxed{51^\circ}$ $2(18) + 15$

Lesson 2 - Properties of Parallel Lines

Date _____ Period _____

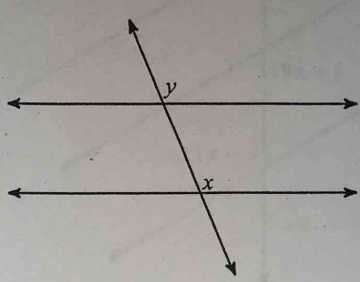
Identify each pair of angles as corresponding, alternate interior, alternate exterior, same-side interior, vertical, or adjacent.

1)



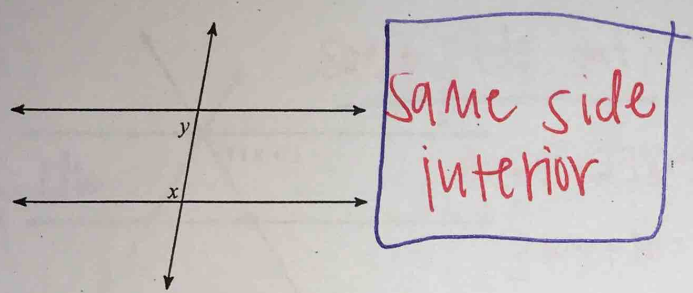
alternate exterior

2)



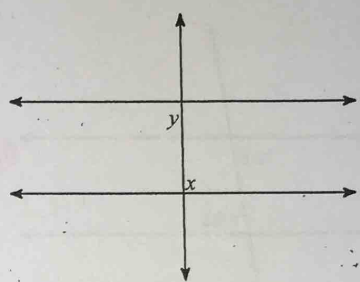
corresponding

3)



same side interior

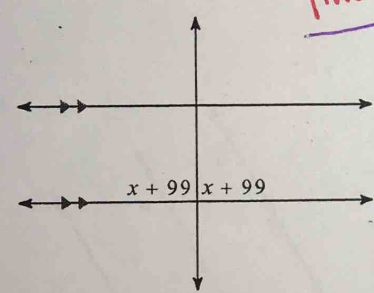
4)



alternate interior

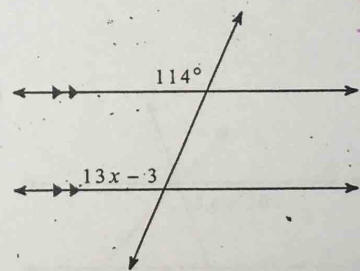
Solve for x.

5)



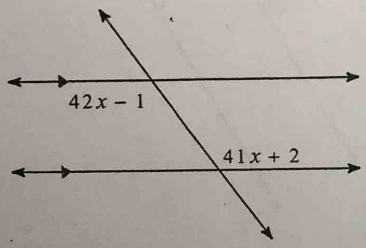
linear pair
 $x + 99 + x + 99 = 180$
 $2x + 198 = 180$
 $2x = -18$
 $x = -9$

6)



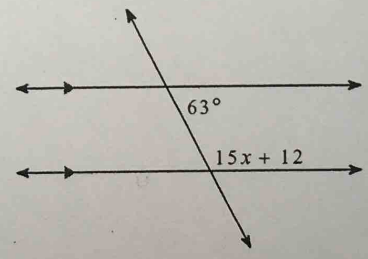
corresponding
 $13x - 3 = 114$
 $13x = 117$
 $x = 9$

7)



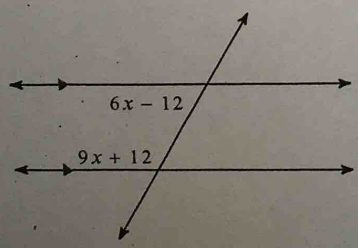
alt. int.
 $42x - 1 = 41x + 2$
 $x = 3$

8)



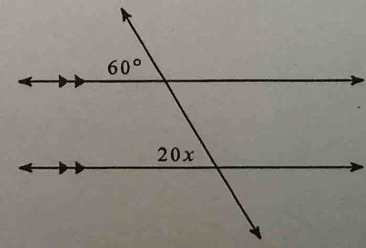
same side int
 $63 + 15x + 12 = 180$
 $15x + 75 = 180$
 $15x = 105$
 $x = 7$

9)



same side int
 $6x - 12 + 9x + 12 = 180$
 $15x = 180$
 $x = 12$

10)



corresponding
 $60 = 20x$
 $x = 3$

Find the value of x that makes lines u and v parallel.

11) corresponding
 $130 = x + 136$
 $-6 = x$

12) alt. int.
 $21x - 6 = 19x + 6$
 $-12 = -2x$
 $x = 6$

13) same side int.
 $11x + 5 + 23x + 5 = 180$
 $34x + 10 = 180$
 $34x = 170$
 $x = 5$

more middle line!

14) alt. int
 $20x = 80$
 $x = 4$

15) alt. ext.
 $60 = 72 + x$
 $x = -12$

16) corresponding
 $5x + 10 = 70$
 $5x = 60$
 $x = 12$