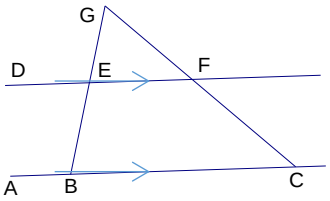
3.2 Using Theorems of Lines and Transversals **Name _____Hr _____**

Match the given angles with their relationship:



1) $\angle DEG$ and $\angle ABE$ are ___.

2) $\angle FEB$ and $\angle EBC$ are ___.

3) $\angle FEB$ and $\angle ABE$ are ___.

4) $\angle DEB$ and $\angle GEF$ are ___.

A. Alternate Interior

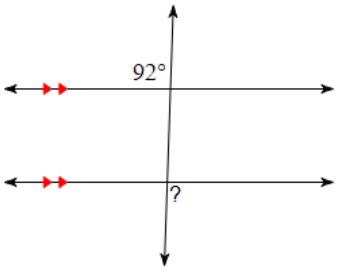
B. Corresponding

C. Consecutive Interior

D. Vertical Angles

Find the measure of each angle indicated.

5)



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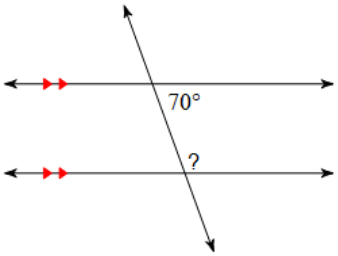

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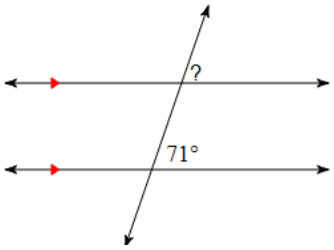
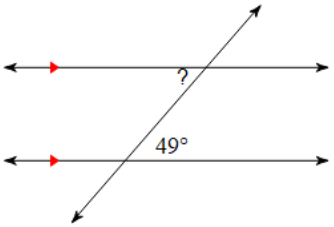
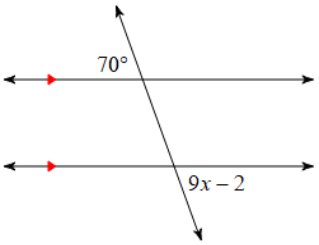


8)

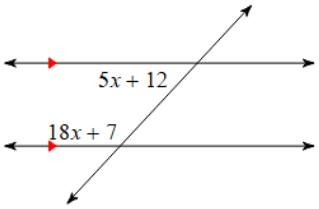


Solve for *x*.

9)

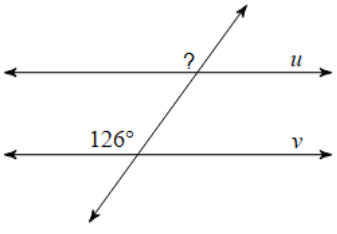


10)

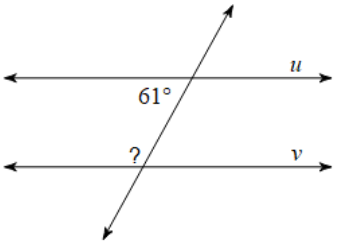


Find the measure of the indicated angle that makes lines u and v parallel.

11)



12)



13) For each statement, determine if $m \parallel n$.

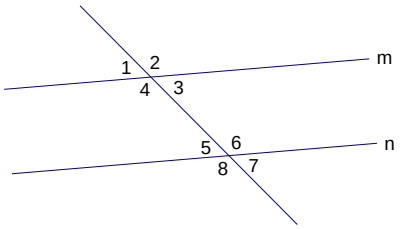
a) $m\angle 1 = 42^\circ$ and $m\angle 5 = 42^\circ$

b) $m\angle 4 = 64^\circ$ and $m\angle 5 = 64^\circ$

c) $m\angle 3 = 118^\circ$ and $m\angle 6 = 62^\circ$

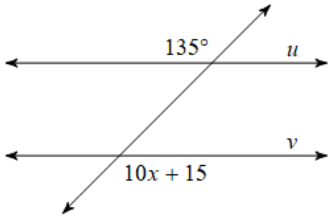
d) $m\angle 2 = (3x-7)^\circ$ and $m\angle 6 = (3x-7)^\circ$

e) $m\angle 3 = y^\circ$ and $m\angle 7 = (180-y)^\circ$

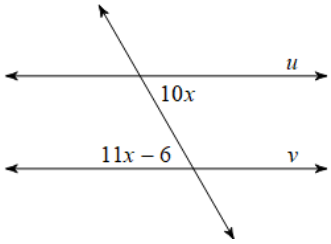


Find the value of x that makes lines u and v parallel.

14)

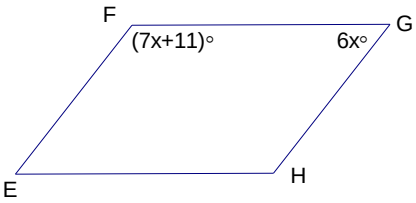


15)

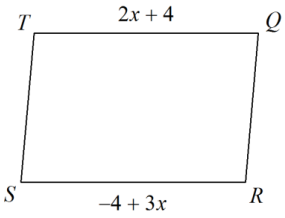


16) Given that WXYZ is a parallelogram and $m\angle W = 63^\circ$, find the measures of the other three angles.

17) Solve for x.



18) Solve for x. Then find the length of RS.



19-22. Circle if the statement is (A) always, (S) sometimes or (N) never true.

19) If two lines are both perpendicular to the transversal, are they parallel to each other? A S N

20) If two lines are cut by a transversal, the alternate interior angles are supplementary. A S N

21) If two lines cut by a transversal form alternate exterior angles that are congruent, the two lines are parallel. A S N

22) If two angles are vertical, they are supplementary. A S N