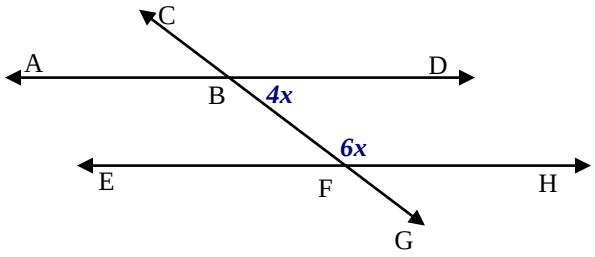
Name_____

# FINDING UNKNOWN ANGLE MEASURES—MIXED ANGLES--#6-KEY

**Directions**: Find the measure of each missing angle in the parallel lines and transversals below. Each pair of angles is either *supplementary* or *congruent* to each other. All you have to do is set up and solve the appropriate equation for each situation. Once you've solved for *x*, plug that value back into each expression to find the measure of each angle.

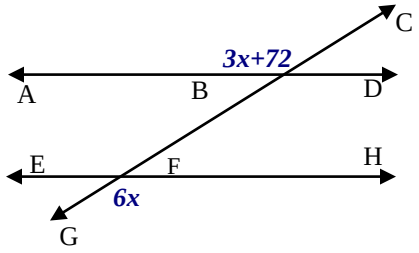
1)




Equation: **4x + 6x = 180**

***x*** = **18** $\angle HFC =$ **108°** $\angle DBG =$ **72°**

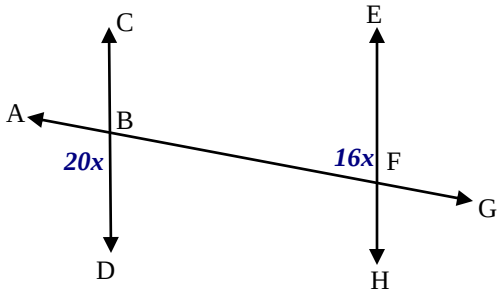
2)




Equation: **6x = 3x + 72**

***x*** = **24** $\angle ABC =$ **144°** $\angle GFH =$ **144°**

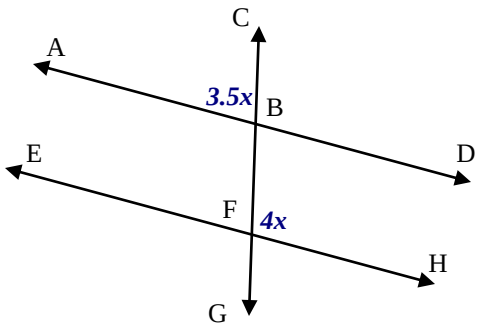
3)




Equation: **20x + 16x = 180**

***x*** = **5** $\angle ABD =$ **100°** $\angle AFE =$ **80°**

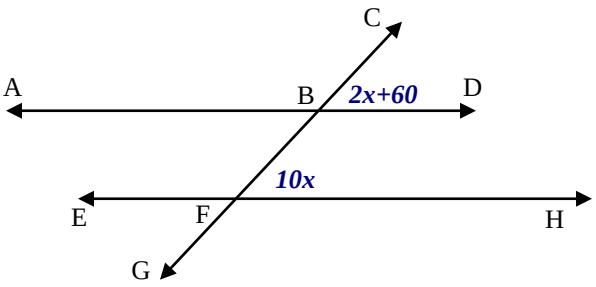
4)




Equation: **3.5x + 4x = 180**

***x*** = **24** $\angle CBA =$ **84°** $\angle CFH =$ **96°**

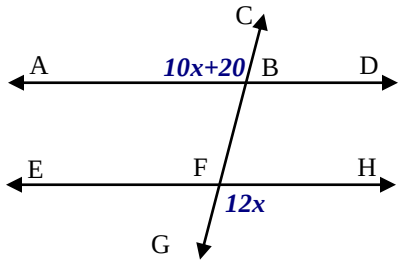
5)




Equation: **10x = 2x + 60**

***x*** = **7.5** $\angle CFH =$ **75°** $\angle CBD =$ **75°**

6)




Equation: **12x = 10x + 20**

***x*** = **10** $\angle ABC =$ **120°** $\angle GFH =$ **120°**