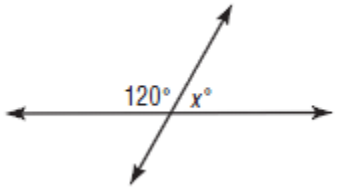
Math 8 Name _____

Practice 6.1 **Classify angles.** Date: _____ Block: _____

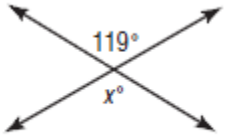
Write if angles are complementary, supplementary, or adjacent. Find the value of x in each figure.

1.



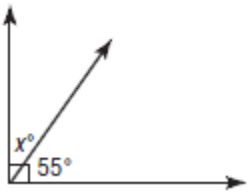
_____, x =

2.



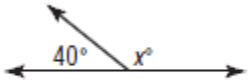
_____, x =

3.



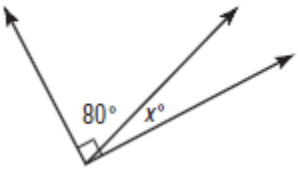
_____, x =

4.



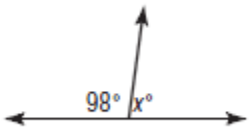
_____, x =

5.



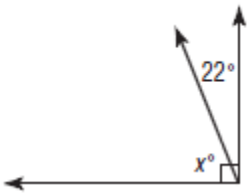
_____, x =

6.



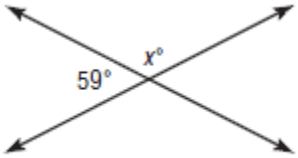
_____, x =

7.



_____, x =

8.

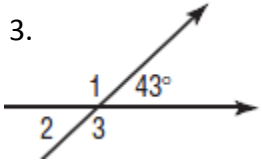


_____, x =

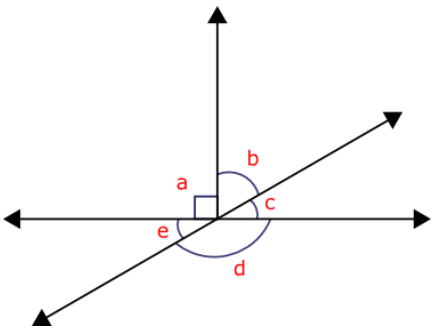
9.

_____, x =

10. Find the measure of angles 1, 2, and 3. Explain your reasoning.



11. Name the angles:



a) Vertical: _____ and _____

b) Complementary: ∠c and _____

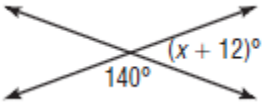
c) Supplementary: ∠c and _____

d) All adjacent: _____

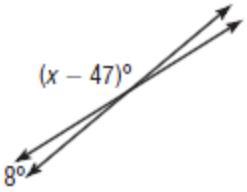
e) Find values of all angles , if angle c is 30°: _____

Find the value of x in each figure.

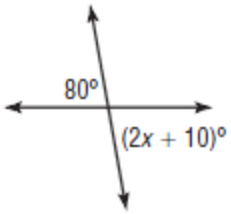
12.



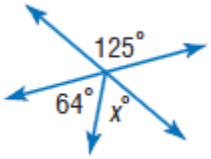
13.



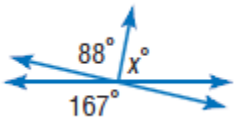
14.



15.



16.



17. ALGEBRA Angles A and B are complementary. If $m\angle A = 3x - 8$ and $m\angle B = 5x + 10$, what is the measure of each angle?

18. ALGEBRA Angles Q and R are supplementary. If $m\angle Q = 4x + 9$ and $m\angle R = 8x + 3$, what is the measure of each angle?

19. The Millers open a savings account for their newborn son with $430. Find the total amount in the account after 3 years if the simple interest rate is 2.5%.

20. Find each percent of change. State whether the percent of change is ***increase*** or ***decrease***.

original: 20 members
new: 27 members

b) old price: $45
sale price: $18

c) original: 620 pages
new: 31 pages

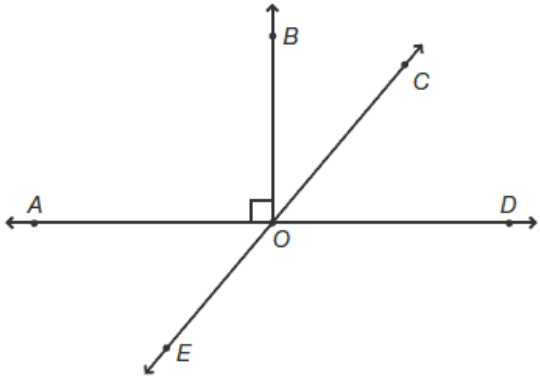
Find the measure of a complement of ∠1 for each of the following measures of ∠1.

1. $m\angle 1 = 68°$ **2.** $m\angle 1 = 80°$ **3.** $m\angle 1 = 3°$

Find the measure of a supplement of ∠2 for each of the following measures of ∠2.

4. $m\angle 2 = 78°$ **5.** $m\angle 2 = 155°$ **6.** $m\angle 2 = 1°$

Use the following figure to answer practice problems 11–13.



7. Name two supplement angles of ∠DOE.

8. Name a pair of complementary angles.

9. Name two pairs of vertical angles.

State whether the following statements are true or false.

10. Complementary angles must be acute.

11. Supplementary angles must be obtuse.

12. Two acute angles can be supplementary.

13. A pair of vertical angles can be complementary.

14. A pair of vertical angles can be supplementary.

15. Vertical angles must have the same measure.

16. Complementary angles can be adjacent.

17. Supplementary angles can be adjacent.

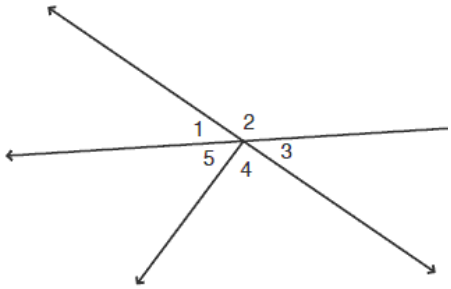
18. Any two right angles are supplementary.

19. Two acute angles are always complementary.

20. An acute and an obtuse angle are always supplementary.

21. The intersection of two rays creates two pairs of vertical angles and four pairs of supplementary angles.

Use the following figure to answer practice problem 21.



21. A common error is assuming that any pair of angles that are "across from each other" are vertical. In this figure, ∠1 and ∠3 are vertical angles because they are formed by intersecting lines. Angles 2 and 4 are not vertical angles. Name three other pairs of nonadjacent angles that are also not vertical.

22. Look at these angles.
Which two angles are complementary?