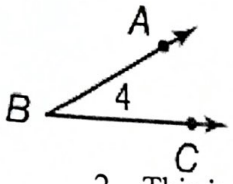
NAME: Period: SCORE: / = %=

HW 5-1
Classifying Angles and Solving Equations

Int 1 Unit 5

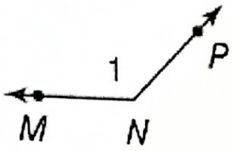
Name each given angle in FOUR different ways. Then, classify the angle as **acute, right, obtuse** or **straight.**

1. This is a(n) Acute angle.
Four ways to name this angle:



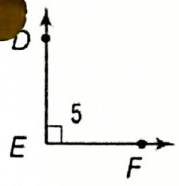
∠4 ∠B
∠ABC ∠CBA

2. This is a(n) _____ angle.
Four ways to name this angle:



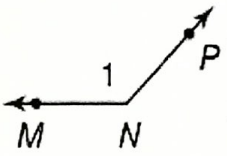
_____ _____
_____ _____

3. This is a(n) right angle.
Four ways to name this angle:



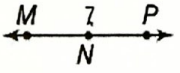
∠5 ∠E
∠DEF ∠FED

4. This is a(n) _____ angle.
Four ways to name this angle:



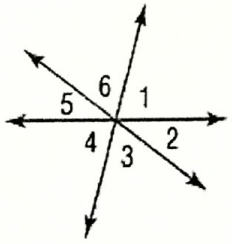
_____ _____
_____ _____

5. This is a(n) _____ angle.
Four ways to name this angle:



_____ _____
_____ _____

Refer to the diagram below. Identify each angle pair as **adjacent, vertical,** or **neither.**



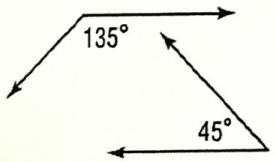
6. ∠5 *and* ∠6

7. ∠1 *and* ∠3
Neither

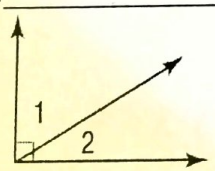
8. ∠2 *and* ∠5

Identify each pair of angles as **complementary, supplementary,** or **neither.**

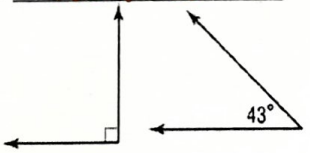
9. Supplementary



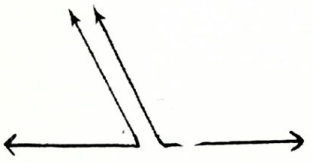
10. _____



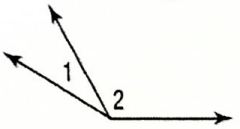
11. Neither



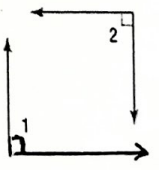
12. _____



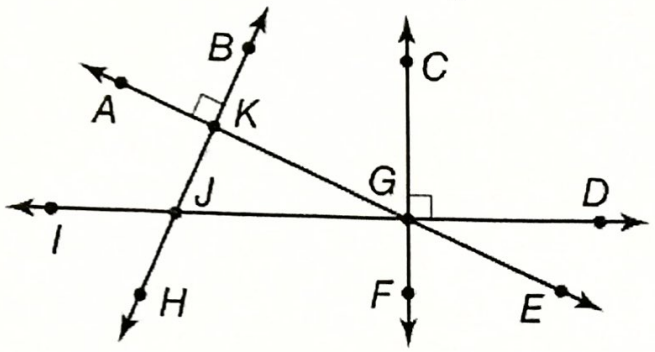
13. Neither



14. _____



Use the diagram to answer the questions that follow.



a) Identify each pair of angles as:
- complementary
- supplementary
- neither

b) Identify each pair of angles as:
- adjacent
- vertical
- neither

Extra Credit

15. *∠IJK and ∠KJG* a)_____ b)_____

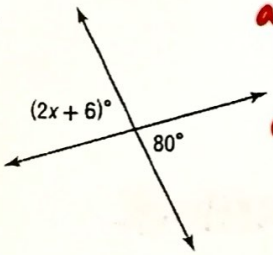
16. *∠DGE and ∠CGK* a)_____ b)_____

17. *∠AKB and ∠JKG* a)_____ b)_____

For the following problems, do each of the following steps.
a) Identify the type of angle relationship that is shown.
b) Set up an equation.
c) Solve the equation for x.

18.

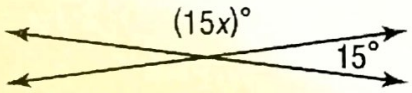
19.



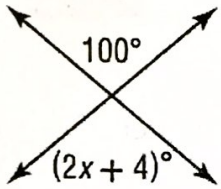
a) vertical

c) x = 36

20.



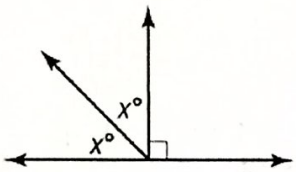
21.



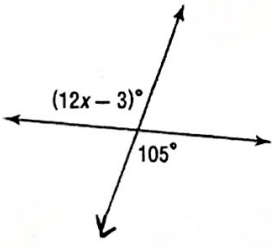
a) vertical

c) x = 48

22.



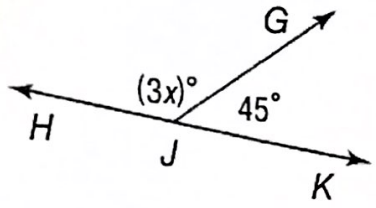
23.



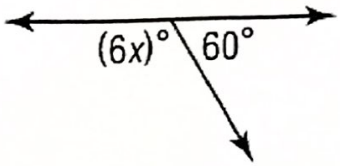
a) vertical

c) x = 9

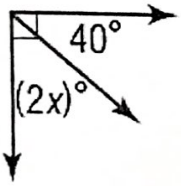
24.



26.



25.



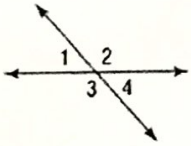
a) Complementary angles

c) $x = 25$

27. $\angle A$ and $\angle B$ are complementary angles. The measure of $\angle B$ is $(4x)°$ and the measure of $\angle A$ is $50°$. What is the value of x?

$x = 10$

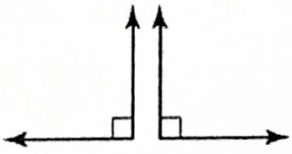
28) Which statement is true?



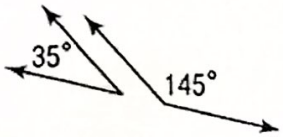
Ⓐ ∠1 and ∠4 are adjacent angles.
Ⓑ ∠2 and ∠3 are vertical angles.
Ⓒ ∠3 and ∠4 are vertical angles.
Ⓓ ∠2 and ∠3 are adjacent angles.

29) Which angle pairs are not supplementary?

Ⓐ



Ⓒ



Ⓓ

Ⓑ