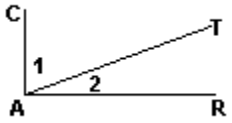
Name_____ **Period**___ **Math 8 Review Unit 9 Angles**

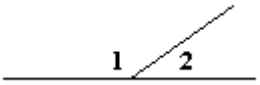
Given: $\overline{CA} \perp \overline{AR}$



1) $m\angle 1 = 56^\circ$, find $m\angle 2$.

2) $m\angle 1 : m\angle 2 = 7 : 2$, find $m\angle 2$.

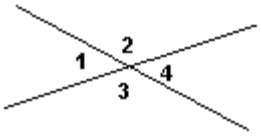
3) $m\angle 1 = 3x + 15$ and $m\angle 2 = x + 5$, find $m\angle 1$.



5) $m\angle 2 = 56^\circ$, find $m\angle 1$.

6) $m\angle 1 : m\angle 2 = 4 : 2$, find $m\angle 2$.

7) $m\angle 1 = x + 30$ and $m\angle 2 = 2x + 30$, find $m\angle 1$.

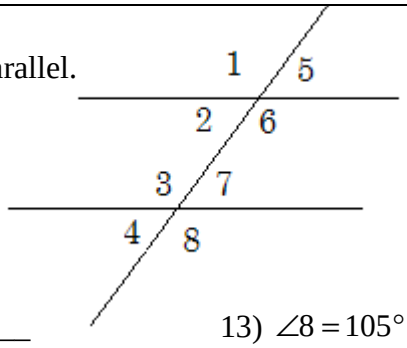


9) $m\angle 1 = 56^\circ$**,** find angles 2, 3, and 4.

10) $m\angle 1 = 3x - 20$ and $m\angle 4 = x + 10$, find $m\angle 1$.

11) $m\angle 2 = 6x + 10$ and $m\angle 3 = x + 30$, find $m\angle 3$.

The following two lines are parallel. Use the diagrams to answer the following questions.



12) $\angle 2 = 70^\circ$, *find* $\angle 7$ _____

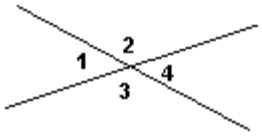
13) $\angle 8 = 105^\circ$ *find* $\angle 3$

14) $\angle 6 = 145^\circ$, *find* $\angle 7$

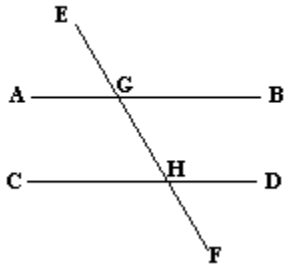
Name the relationship _____ _____ _____

15) Name all the angles that are supplementary to $\angle 2$. _____

16. Write the equation would you use to solve for x if <2 = 3x + 10 and <4 = 2x + 3?



Use the following diagram for #17-19.



17. If m∠AGH=100º, find the $\boldsymbol{m\angle CHF}$

18. If m∠BGH = x + 25 and m∠GHD = 5x - 25, find m∠BGH.

19. If m∠EGA = 4x and m∠GHC = 3x+40, find m∠GHD.

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20) For each table below write the function rule:

X	Y
1	6
2	7
3	8
4	9

21) Solve for x: 8(2x + 3) = 32

22) Solve the system of equations: 2x + 2y = 48
y = 5x

23) What is the coordinate of A' if A(-3,-4) is reflected over the x-axis?

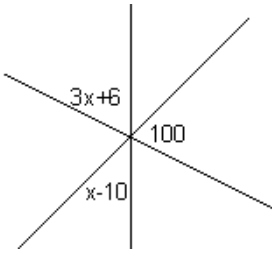
Simplify:

24. $4^5 \times 4^{-3}$

25. $4^5 \div 4^{-3}$

26. $(\mathbf{4^{-3}})^{\mathbf{5}}$

27. Using the diagram to find the value of x.



28) Which of the following represents a linear equation?

A) $y = x^2 - 2x - 8$ B) $y = 3x^2 - 6x - 8$ C) $y = 9x^2 - 2$ D) $y = 2x - 8$

29) What is the image of the point (2, 5) under the translation that shifts (x,y) to (x+3, y-2)?

A) (3,5) B) (-1, 3) C) (5, 2) D) (5,3)

30) What is the slope for the given points: A (6, -5), B (3, -7)?

A) $-\frac{2}{3}$ B) $-\frac{3}{2}$ C) $\frac{3}{2}$ D) $\frac{2}{3}$

For #31-38, State the number of solutions:

31. $4x + 6 = 4x - 6$

32. $4x + 6 = 4x + 6$

33. $4x + 6 = 2x + 6$

34. $4x + 6 = 2(2x + 3)$

35. $y = 2x + 3$
$y = -2x + 3$

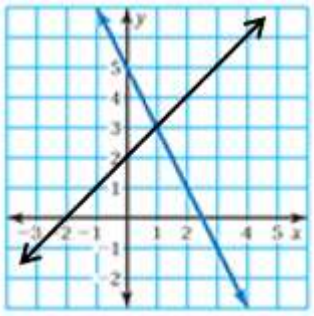
36. $y = 2x + 3$
$y = 2x - 3$

37. $y = 2x + 3$
$2y = 2x + 3$

38. $y = 2x - 6$
$2y = 2(x - 3)$

39. Use the system to the right:

A. Determine the number of solutions.
B. State the solution to the system.
C. Write the equation of each line.
D. Using your answers from part **C**, solve the system algebraically to prove your answer to part **B**.



40)Which equation is the same as 2x + y = 5

A) y = 2x + 5 B) y = 2x - 5 C) y = -2x + 5 D) y = -2x – 5