

1st Term Review

Date _____ Period _____

Evaluate each expression.

$$1) \frac{(11+4)}{3}$$

$$15 \div 3$$

$$\textcircled{5}$$

$$2) 4 \div 2 + 4$$

$$2 + 4$$

$$\textcircled{6}$$

$$3) (5+3) \times 6$$

$$8 \cdot 6$$

$$\textcircled{48}$$

$$4) (13-1) \div 6$$

$$12 \div 6$$

$$\textcircled{2}$$

Evaluate each using the values given.

5) $m - p \div 3$; use $m = 3$, and $p = 3$

$$3 - 3 \div 3$$

$$3 - 1$$

$$\textcircled{2}$$

6) $(q + p) \div 2$; use $p = 1$, and $q = 1$

$$(1+1) \div 2$$

$$2 \div 2$$

$$\textcircled{1}$$

7) $2 + n - p$; use $n = 4$, and $p = 4$

$$2 + 4 - 4$$

$$6 - 4$$

$$\textcircled{2}$$

8) $p + 3 - r$; use $p = 4$, and $r = 1$

$$4 + 3 - 1$$

$$7 - 1$$

$$\textcircled{6}$$

Solve each equation for the indicated variable.

9) $u = \frac{a}{k}$, for a $k \cdot u = \frac{a}{k} \cdot k$

$$\textcircled{ku = a}$$

10) $z = \frac{m}{c} + x$, for x

$$\textcircled{zm = x}$$

11) $u = ak$, for a

$$\frac{u}{k} = \frac{ak}{k}$$

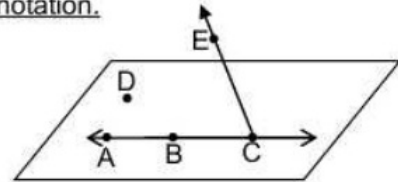
$$\frac{u}{k} = a$$

12) $g = ca$, for a

$$\frac{g}{c} = a$$

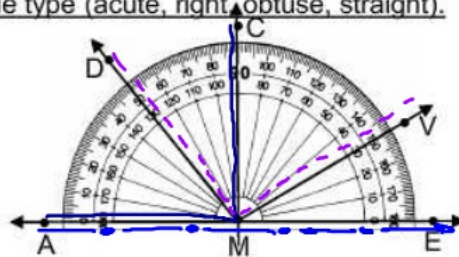
Use the diagram at the right for problems 13-16. Use correct notation.

13. Name 3 points that are collinear. A, B, C
 14. Name 3 points that are non-collinear. A, B, D
 15. Name 4 non-coplanar points. A, B, C, E
 16. Name 2 intersecting lines. AC, EC



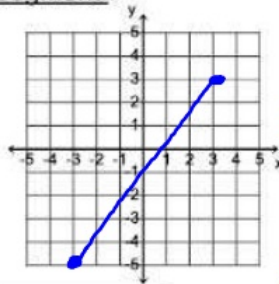
Find the measure of each angle and identify the angle type (acute, right, obtuse, straight).

17. $\angle AMC$ 90° Right
 18. $\angle DMV$ 100° Obtuse
 19. $\angle AME$ 180° Straight

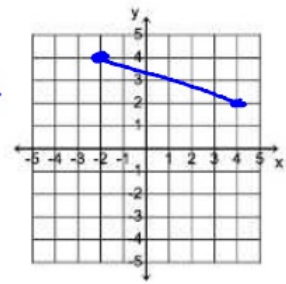


Find the length of the segment.

20. $(x_1, y_1) (x_2, y_2)$
 $(3, 3) (-5, -3)$
 $d = \sqrt{(-5-3)^2 + (-3-3)^2}$
 $= \sqrt{(-8)^2 + (-6)^2}$
 $= \sqrt{64 + 36}$
 $= \sqrt{100} = 10$



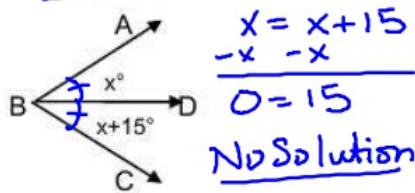
21. $(x_1, y_1) (x_2, y_2)$
 $(-2, 4) (4, 2)$
 $d = \sqrt{(4-(-2))^2 + (2-4)^2}$
 $= \sqrt{(6)^2 + (-2)^2}$
 $= \sqrt{36 + 4}$
 $= \sqrt{40}$



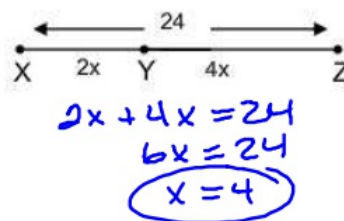
Distance Formula: $\sqrt{(x-x)^2 + (y-y)^2}$

Solve for x. Show your work.

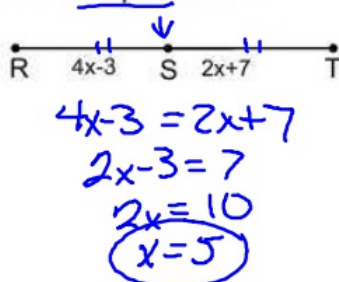
22. BD bisects $\angle ABC$.



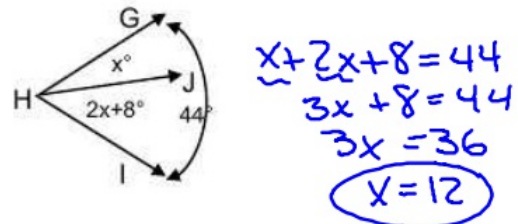
- 23.

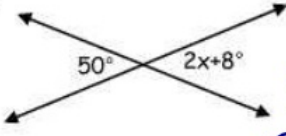


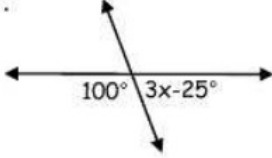
24. S is the midpoint of \overline{RT} .

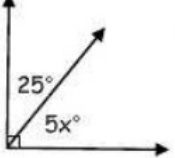


- 25.




26.  Vertical
 $50 = 2x + 8$
 $42 = 2x$
 $21 = x$

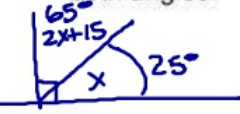
27.  Linear Pair (=180)
 $100 + 3x - 25 = 180$
 $3x + 75 = 180$
 $3x = 105$
 $x = 35$

28.  Complementary
 $25 + 5x = 90$
 $5x = 65$
 $x = 13$

29. Two angles are supplementary. One angle is 3 times the measure of its supplement. Find the measure of both angles.

 $3x + x = 180$
 $4x = 180$
 $x = 45$

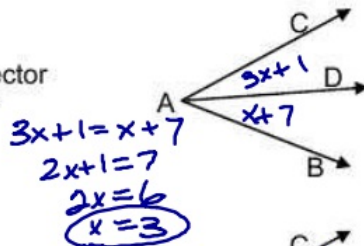
30. Two angles are complementary. One angle is 15 more than twice the complement. Find the measure of both angles.

 $x + 2x + 15 = 90$
 $3x + 15 = 90$
 $3x = 75$
 $x = 25$

Questions 31 – 37, (1) Label the diagram (2) Solve for x and (3) state the property used to solve.

31. _____

\overline{AD} is an angle bisector
 $m\angle CAD = (3x + 1)^\circ$
 $m\angle DAB = (x + 7)^\circ$

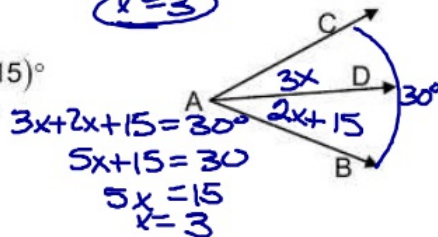


$x = 3$

Property: Angle Bisector Congruent.

32. _____

$m\angle BAD = (2x + 15)^\circ$
 $m\angle CAD = (3x)^\circ$
 $m\angle BAC = 30^\circ$

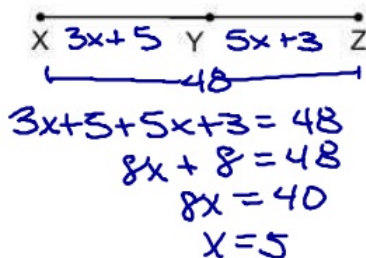


$x = 3$

Property: Adjacent Angle Addition

33. _____

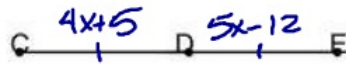
$XY = 3x + 5$
 $YZ = 5x + 3$
 $XZ = 48$



$x = 5$

Property: Segment Addition

34. _____



D is the midpoint of \overline{CE}
 $CD = 4x + 5$
 $DE = 5x - 12$

$$4x + 5 = 5x - 12$$

$$5 = x - 12$$

$$17 = x$$

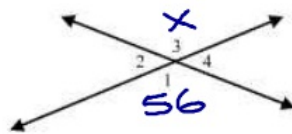
X = 17

Property: midpoint Congruent.

Questions 35 – 37, (1) Label the diagram (2) Solve for x and (3) state the property used to solve.

35. _____

$m\angle 1 = 56^\circ$
 $m\angle 3 = x$

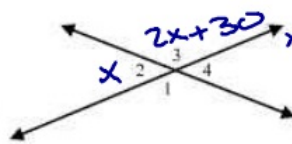


X = 56°

Property: Vertical

36. _____

$m\angle 2 = x$
 $m\angle 3 = 2x + 30$



$$x + 2x + 30 = 180$$

$$3x + 30 = 180$$

$$3x = 150$$

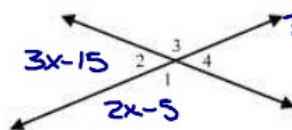
$$x = 50$$

X = 50

Property: Linear Pair

37. _____

$m\angle 2 = 3x - 15$
 $m\angle 1 = 2x - 5$



$$3x - 15 + 2x - 5 = 180$$

$$5x - 20 = 180$$

$$5x = 200$$

$$x = 40$$

X = 40

Property: Linear Pair

Questions 11-14, Label the appropriate angle or name the angle given.

38. _____

Complementary. : $\angle COD$ and $\angle EOD$

39. _____

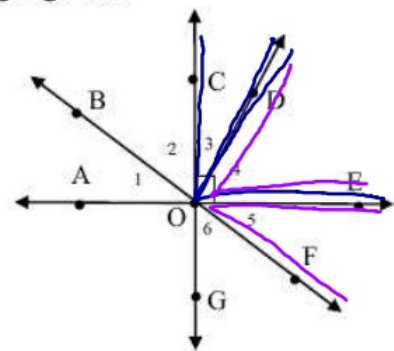
adjacent. : $\angle 5$ and $\angle 4$

40. _____

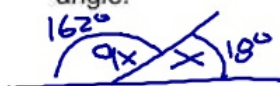
Supplementary Angles: $\angle BOA$ & $\angle AOF$

41. _____

Vertical Angles: $\angle 2$ & $\angle 6$



42. The supplement of an angle is 9 times the measure of the angle itself. Find the angle.

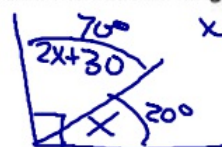


$$9x + x = 180$$

$$10x = 180$$

$$x = 18$$

43. The complement of an angle is two times plus 30 the measure of the angle itself. Find the angle.



$$x + 2x + 30 = 90$$

$$3x + 30 = 90$$

$$3x = 60$$

$$x = 20$$