(14) If B is between A and C on $\overline{AC}$ with AB = 4n - 2 and BC = 2n - 2, what is AC?
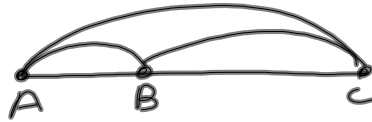

$$AB + BC = AC$$
$$\downarrow$$
$$4n-2 + 2n-2 = AC$$
$$6n - 4$$

(18)

$m = -\frac{1}{7}$

Which equation would be perpendicular to the $y = -\frac{1}{7}x + 3$?

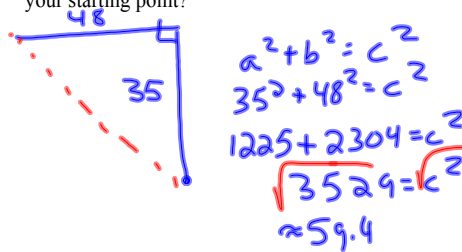A. $y = \frac{1}{7}x - 3$ B. $y = \frac{1}{7}x + 3$ C. $y = 7x - 5$

D. None of the above

(17)

Which of triangle measurements below is a right triangle?

A. 2, 4, 7   B. 6, 8, 10   C. 11, 12, 13   D. 12, 14, 16

$\downarrow$ $\downarrow$

$2^2 + 4^2 = 7^2$ $6^2 + 8^2 = 10^2$ ✓

$4 + 16 = 49$

(20) If you walk 35 miles due North and then 48 miles due West, rounded to the nearest mile how far are you from your starting point?

48

35

$$a^2 + b^2 = c^2$$
$$35^2 + 48^2 = c^2$$
$$1225 + 2304 = c^2$$
$$\sqrt{3529} = c^2$$
$$\approx 59.4$$

(25) If $\angle A$ and $\angle B$ are a linear pair with $\angle A = n + 40$ and $\angle B = 9n + 20$, what is the measurement of $\angle A$?

$9n+20$ / $n+40$

$$9n+20 + n+40 = 180°$$
$$10n+60 = 180$$
$$-60 \quad -60$$
$$10n = 120$$
$$n = 12$$

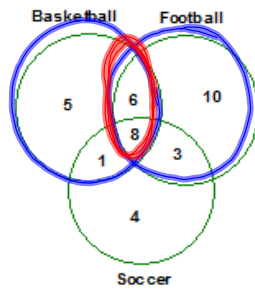$$\angle A = n + 40$$
$$= 12 + 40 = 52$$

32 Consider the statement: "If an angle is 90 degrees, it is a right angle." Is the converse of this statement true or false?

If it is a right angle then the angle is 90°.

True

42. If AB = 6 and AB + BC = 10, then 6 + BC = 10 demonstrates what property?
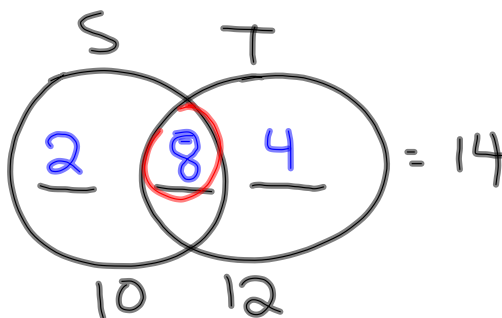
Substitution

Basketball   Football
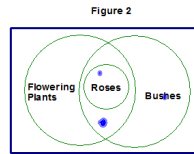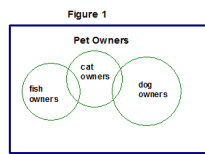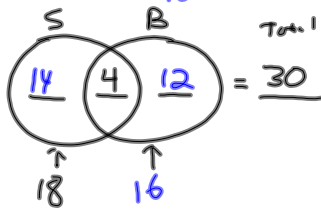
5   6   10
     8
1   3

4

Soccer

48 According to the Venn diagram, how many play football and basketball at the same time?

14

50 I have a total of 14 kids. If 10 of my kids play soccer and 12 play tennis, how many play both tennis and soccer? *8*
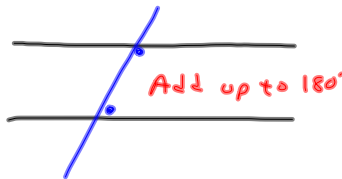
S   T

2 (8) 4   = 14

10   12

51) There are 30 kids who play either soccer or baseball.
4 of the 30 kids play both soccer and baseball.
If the soccer team has 18 members, how many kids
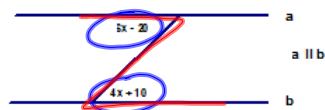are on the baseball team? **16**

S   B   Total

(14 (4) 12) = **30**

↑   ↑
18   16

Figure 1

Pet Owners

cat owners

fish owners   dog owners

Figure 2

Flowering Plants   Roses   Bushes

54) In Figure 2 above, which statement is true?
A. No bushes are flowering plants.
B. No roses are bushes.
C. Some flowering plants are bushes.
D. Some roses are not flowering plants.

58) If lines are parallel, consecutive interior angles are equal.
A. True   B. False

Add up to 180°

60) What is the value of x in the figure below?
A. 15°   B. 16°   C. 19°   D. 21°

6x - 20

4x + 10

a ∥ b

$6x - 20 = 4x + 10$
$-4x \qquad -4x$
$2x - 20 = 10$
$+20 \quad +20$
$2x = 30$
$x = 15$

68) What would be the slope of the line that is perpendicular to $y = 5x + 4$?

A. 5   B. -5   C. $\frac{1}{5}$ D. $-\frac{1}{5}$

$m = 5$

$-\frac{1}{5}$

3