Writing and Solving Equations from Situations
Topic 3 Homework

Name _____

Word Problems: WRITE equations FIRST and then SOLVE to Answer the Problem

1. The product of 4 and a number plus the product of 3 and the same number is 35. What is the number?

2. A number added to 12 and then subtracted by 18 equals 26. What is the number?

3. Beth is 3 times older than her sister Jill. If together their ages are 24, how old is each girl?

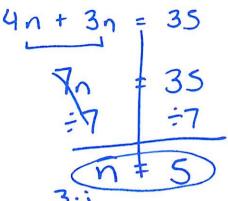4. A number minus 8 and then subtracted by 12 is equal to 5. What is the number?

5. Steve rode 4 miles on his bike the first day, m miles on the second day and 7 miles on the third day. If on all three days he rode a total of 20 miles, write and solve an equation to find out how many miles Steve rode on the second day.

6. Stan bought 6 posters for d dollars and a book for $20. If his total came to $44, write and solve an equation to determine the cost of a single poster.
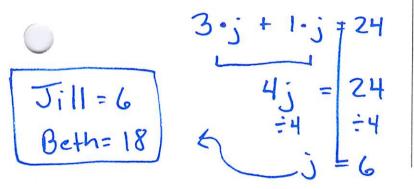
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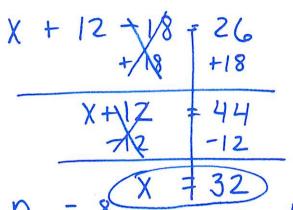
$$4n + 3n = 35$$
$$7n = 35$$
$$\div 7 \qquad \div 7$$
$$\boxed{n = 5}$$

2. A number added to 12 and then subtracted by 18 equals 26. What is the number?

$$x + 12 - 18 = 26$$
$$x + 12 = 44$$
$$-12 \qquad -12$$
$$\boxed{x = 32}$$

3. Beth is 3 times older than her sister Jill. If together their ages are 24, how old is each girl?

$$+ = 24$$

$$3 \cdot j + 1 \cdot j = 24$$
$$4j = 24$$
$$\div 4 \qquad \div 4$$
$$j = 6$$

Jill = 6
Beth = 18

4. A number minus 8 and then subtracted by 12 is equal to 5. What is the number?

$$n - 8 - 12 = 5$$
$$n - 8 = 17$$
$$+8 \qquad +8$$
$$\boxed{n = 25}$$

5. Steve rode 4 miles on his bike the first day, m miles on the second day and 7 miles on the third day. If on all three days he rode a total of 20 miles, write and solve an equation to find out how many miles Steve rode on the second day.

$$4 + m + 7 = 20$$
$$-7 \qquad -7$$
$$4 + m = 13$$
$$-4 \qquad -4$$
$$\boxed{m = 9 \text{ miles}}$$

6. Stan bought 6 posters for d dollars and a book for $20. If his total came to $44, write and solve an equation to determine the cost of a single poster.

$$6 \cdot d + 20 = 44$$
$$-20 \qquad -20$$
$$6d = 24$$
$$\div 6 \qquad \div 6$$
$$\boxed{d = \$4 \text{ per poster}}$$