Date _____

Warm-Up

5th Grade CST #14	**Review:**
Which of the following shows the number 60 factored into prime numbers? A 2×30 B 3×20 C $2 \times 3 \times 10$ D $2 \times 2 \times 3 \times 5$	$224 - \square = 204$

Current:	**Other:**
Lisa did this division problem. $12 \div 4 = 3$ Which expression would she use to check her work? A $12 \div 3$ B $12 \div 4$ C 3×4 D $3 + 4$	What value of p makes this equation true? $44 \times 73 = 44 \times (p + 3)$

Today's Objective/Standards: 5AF1.2*, 5AF1.3

Topic: Solving One-Step Equations Using Decomposition **Date:**_____

Text Chapter/Section:_____

Warm-up:

Choose students to debrief on white board or overheads to share with the class.

Review Homework Notes:

Lesson:

Ex1)

$7 + m = 10$

$\cancel{7} + m = \cancel{7} + 3$

$m = 3$

or

$7 + m = 10$

$\cancel{7} + m = 10 \; (+\cancel{7} - 7)$

$m = 10 - 7$

$m = 3$

"If I add 7 then take it away, have I changed the value of 10?" [No]
"If I add zero to 10 have I changed it ?" [No]

You-try: (Think/Pair/Share)

1)

$x + 5 = 12$

$x + \cancel{5} = 7 + \cancel{5}$

$x = 7$

or

$x + 5 = 12$

$x + \cancel{5} = 12 \; (+\cancel{5} - 5)$

$x = 12 - 5$

$x = 7$

Ex2)

$9 - m = 6$

$9 - \cancel{m} = 6 \; (-\cancel{m} + m)$

$9 = 6 + m$

$\cancel{6} + 3 = \cancel{6} + m$

$3 = m$

or

$9 - m = 6$

$6 + m = 9$

$\cancel{6} + m = \cancel{6} + 3$

$m = 3$

Note: It's important that students know they can rewrite the equation using the inverse operation or simply add a zero pair, so they can take a $-m$ from both sides.

You-try: (Think/Pair/Share)

2)

$16 - m = 11$

$16 - \cancel{m} = 11 \; (-\cancel{m} + m)$

$16 = 11 + m$

$11 + 5 = 11 + m$

$5 = m$

or

$16 - m = 11$

$11 + m = 16$

$11 + m = 16 \; (+11 - 11)$

$m = 16 - 11$

$m = 5$

Ex3)

$m - 3 = 4$

$m - \cancel{3} = 7 - \cancel{3}$

$m = 7$

or

$m - 3 = 4$

$m - \cancel{3} = 4 \; (-\cancel{3} + 3)$

$m = 4 + 3$

$m = 7$

You-try: (Think/Pair/Share)

3)

$y - 6 = 4$

$y - \cancel{6} = 10 - \cancel{6}$

$y = 10$

or

$y - 6 = 4$

$y - \cancel{6} = 4 \; (-\cancel{6} + 6)$

$y = 4 + 6$

$y = 10$

Lesson continued:

Ex 4)

or

$4y = 12$ | $4y = 12$

$\frac{4}{4}y = \frac{4}{4} \times 3$ | $\frac{2 \times 2}{2 \times 2}y = \frac{2 \times 2}{2 \times 2} \times 3$

$y = 3$ | $y = 3$

You-try: (Think/Pair/Share)

4)

or

$5m = 20$ | $5m = 20$

$\frac{5}{5}m = \frac{5}{5} \times 4$ | $\frac{5}{5}m = \frac{5}{5} \times 2 \times 2$

$m = 4$ | $m = 2 \times 2$

$m = 4$

Ex 5)

or

$y \div 3 = 4$ | $y \div 3 = 4$

$\frac{y \div 3}{3} = \frac{12 \div 3}{3}$ | $4 \times 3 = y$

$y = 12$ | $12 = y$

You-try: (Think/Pair/Share)

5)

or

$z \div 4 = 7$ | $z \div 4 = 7$

$\frac{z \div 4}{4} = \frac{28 \div 4}{4}$ | $7 \times 4 = z$

$z = 28$ | $28 = z$

Additional Practice Problems:

1) $12 - m = 5$

2) $6 + n = 11$

3) $n - 9 = 13$

4) $c + 15 = 17$

5) $4x = 8$

6) $14 \div s = 2$

7) $y \times 5 = 15$

8) $t \div 3 = 8$

Homework: