

UNIT 2 TEST Tutor Practice

1 Simplify: $4[(3+5)+3(-3+2)]$

$$4[-2 + -15] \\ 4 \cdot -17 = \boxed{-68}$$

2) Evaluate: $5m^2 - 3k$ for $m = -2$ and $k = 2$

$$5 \cdot (-2)^2 - 3 \cdot 2 \\ 5 \cdot 4 - 6 \quad 20 - 6 = \boxed{14}$$

3) Simplify: $14 + 2(-9k + 7) - 30k$

$$\cancel{14} + 18k + \cancel{-14} - 30k \\ \boxed{-12k}$$

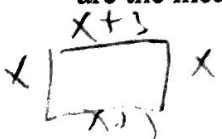
4) Simplify: $3 + 4(-2x^2 + 5) - 6x^2$

$$3 + -8x^2 + 20 + -6x^2 \quad \boxed{23 - 14x^2} \quad \text{or} \quad \boxed{14x^2 + 23}$$

5) Solve: $-3(m + 2) = 4(m - 5)$

$$-3m + -6 = 4m + -20 \\ \cancel{-3m} + \cancel{12} = \cancel{4m} + -20 \\ \cancel{12} + 12 = \cancel{12} + -20 \\ 24 = -20 \\ \cancel{24} + 20 = \cancel{-20} + 20 \\ 44 = 0 \\ \cancel{44} - 44 = \cancel{0} - 44 \\ 0 = -44 \\ \cancel{0} + 44 = \cancel{-44} + 44 \\ 44 = 44 \\ \cancel{44} \div 44 = \cancel{44} \div 44 \\ 1 = 1 \\ m = 2 \quad \boxed{m=2}$$

6) The perimeter of a rectangular frame is 70 inches. The width of the frame is 3 more than the length. What are the measurements for the width and length of the frame?



width	$x+3$	19
length	x	16

$$4x + 6 = 70 \\ \cancel{4x} + \cancel{-6} = \cancel{70} - 6 \\ \cancel{4x} = 64 \\ \cancel{4x} \div 4 = \cancel{64} \div 4 \\ x = 16$$

7) Connor has 5 more than 3 times as many cookies as Jim. Together they have 21 cookies. Find the number of cookies Jim has.

Connor	$3x + 5$
Jim	x

$$4x + 5 = 21 \\ 4x = 16 \\ x = 4$$

Jim 4 cookies

8) Mike has 10 books and Ike has 15 books. If Mike get 3 books per month and Ike gets 2 books per month, how many months will it take for them to have the same number of books?

$m = \text{months}$

Mike	$10 + 3m$
Ike	$15 + 2m$

$$10 + 3m = 15 + 2m \\ m = 5$$

5 months

9) If a number n is added to 15, the result is 5 less than 6 times n . What is the value of n ?

$$n + 15 = 6n - 5$$

$$70 = 5n \\ \boxed{n=14}$$

10) Write an equation for each problem, then solve. Show your work. Make sure you answer the question.

Jill's job is baking cakes. Her pay is \$9 per hour. She also makes \$12 per hour for any time over 40 hours that she works in one week. she worked 40 hours last week plus some overtime hours and made \$552. How many overtime hours did she work?

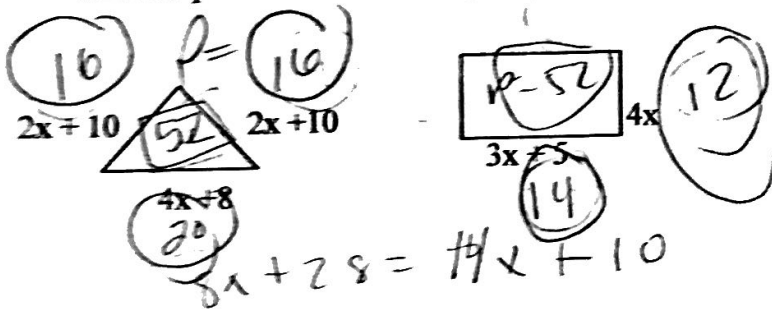
$$40 \cdot 9 + 12h = 552$$

$$360 + 12h = 552$$

$h = 16$ hours overtime

11) The figures have the same perimeter.

Find the perimeter of the triangle and the rectangle.



$$3x + 28 = 14x + 10$$

$$18 = 11x$$

$$x = 3$$

12) Find 4 consecutive odd integers whose sum is -56.

1	x	-17
2	$x+2$	-15
3	$x+4$	-13
4	$x+6$	-11

$$4x + 12 = -56$$

$$4x = -68$$

$$x = -17$$

13) Compare and contrast a constant and a coefficient.

Both are numbers, one is by itself and one is mult. with a variable.