Name:_____ Date:_____

Unit 1: Equations HW #2 Multi-Step

Directions: Solve the following equations, show the check when asked.

1. $-5c+9c=-20$ *Check:*

2. $36=6b-6+b$

3. $6(7k-10)=24$ *Check:*

4. $4(g+2)+8g=56$

5. $6(2k+5)-3k=66$

6. If a number is added to itself and the sum is multiplied by 2, the product is 4.

Spiral:

7. $-11 - y = 14$

8. $\frac{2}{3}x = -8$

9. $4x - 1.5 = 1.3$

10. Translate and solve: the quotient of a number *x* and -8 is -25.

Name:_____ **Date:**_____

Unit 1: Equations **HW#2 Variables on both sides day 1**

Directions: Solve the following equations, show the check when asked.

1. $7a = a - 24$ *Check:*

2. $-15t = -33 - 5t$

3. $3a + 4 = a + 18$

4. $0.5m + 6.4 = 4.9 - 0.1m$ *Check:*

5. $3(a+1)=19-5a$

6. $6x+7-2x+4=4(-3x-5)-17$

7. $2(4-2r)-5=-2(r+5)+8r$

Check:

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Unit 1: Equations Variables on Both Sides Day 2

Directions: Solve the following equations, show the check when asked.

1. $-\frac{3}{4}(-x+8)=\frac{1}{2}(6x-10)$ *Check:*

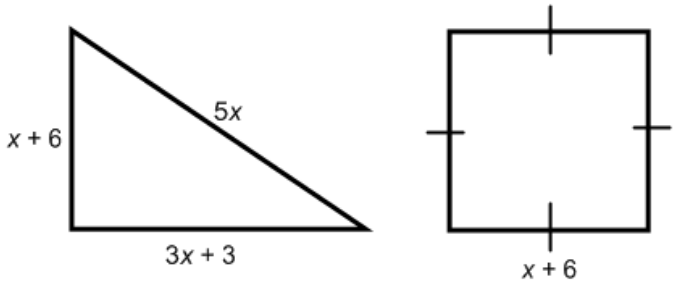
2. $-5(3m+6)=-3(4m-2)$

3. $0.2(x+50)-6=0.4(3x+20)$

4. $-7(k+9)=9(k-5)-14k$ *Check:*

5. Two times the sum of a number and two is the same as five less than five times the number. What is the number?

6. What value of x makes the perimeters of the figures below equal?



7. Suppose a video store charges nonmembers \$4 to rent each video. A store membership costs \$21 and members pay only \$2.50 to rent each video. For what number of videos is the cost the same?

Evaluate the following:

8. $3.5x - 10$ when $x = 2$

Name:_____ **Date:**_____

Notes & HW #5 – Practice **Counts as a Quiz Grade**

Directions: Solve the following equations, show the check when asked.

1. $-67 = -8n + 5$ *Check:*

2. $-d + 7 = 3$

3. $5.8n + 3.7 = 29.8$

4. $-9 = -\frac{h}{12} + 5$ *Check:*

5. $\frac{3}{4}x + \frac{1}{3} = -\frac{1}{3}$

6. $3a+6=9a+8$ *Check:*

7. $4(x+2)-2x=4x-2$

8. $3(x-4)+6=5(x-1)+1$

9. $-2(x-5)=6\left(2-\frac{1}{2}x\right)$ *Check:*

10. $\frac{1}{2}(x-6)+1=2(x-10)-3$

11. $3p=4(-3p+6)$

Translate and solve the following. ***Only an algebraic solution will be accepted.***

12. Three-eighths of a number is twenty seven.

13. Last season, Everett scored forty-eight points. This is six less than twice the number of points that Max scored. How many points did Max score?

14. You want to buy a bouquet of yellow roses and baby's breath for $16.00. The baby's breath costs $3.50 per bunch, and the roses cost $2.50 each. You want one bunch of baby's breath and some roses for your bouquet. How many roses can you buy?

15. Two angles are congruent (they are the same measure). One angle is represented by the expression $(4x-2)°$, and the other angle is $(5x-3)°$. Write an equation and solve for each angle.

Multiple Choice:

16. Solve: $\frac{y-5}{3}=1$

a) -2 **b)** 8 **c)** 18 **d)** 6

17. Kaitlin earns $6.50 for each hour she works. On Friday she worked for 3 hours. She also worked on Saturday. If she earned a total of $52.00 for the two days of work, how many hours did she work on Saturday?

a) 6hrs **b)** 5hrs **c)** 7hrs **d)** 4hrs

18. Solve: $\frac{d}{3.1}+10.5=-7.6$

a) 8.99 **b)** -56.11 **c)** -34.06 **d)** -21.20

19. Mark wants to buy a skateboard that costs $65. He plans to save $5 per week. How many weeks will it take him to save $65?

a) 13 weeks **b)** 325 weeks **c)** 70 weeks **d)** 60 weeks

20. Which of the following equations is *not* equivalent to $x+8=11$?

a) $(x+8)-3=8$ **b)** $(x+8)+5=16$

c) $2(x+8)=24$ **d)** $x=3$

Name:_____ Date:_____

Unit 1- Equations HW #6 Special Cases

Directions: Solve the following equations.

1. $8(c-9)=6(2c-12)-4c$

2. $\frac{2}{5}(15x-20)=3(3x-4)$

3. Hans needs to rent a moving truck. Suppose Company A charges a rate of $40 per day and Company B charges a $60 fee plus $40 per day. For what number of days is the cost the same? Show work or explain.

4. One cell phone plan costs $29.94 per month plus $.10 for each text message sent. Another plan costs $32.99 per month plus $.05 for each text message sent. For what number of text messages will the monthly bill for both plans be the same?

5. A room's floor is y meters long. Its width is 5 meters shorter. If the perimeter of the floor is $(4y+1)$ meters, can you solve for its length? Show work and explain.

Multiple Choice:

6. Solve: $5h - 9 = -16 + 6h$

a) 4 **b)** -7 **c)** 7 **d)** 10

7. Solve: $-2(m - 30) = -6m$

a) -15 **b)** -13 **c)** -8 **d)** 8

8. Solve: $9 + 5m = 5m - 1$

a) No solution **b)** 10 **c)** Identity **d)** -9

9. The students from Mr. Jansen's class and Mrs. Schmidt's class went on a trip to a science museum. Admission was $8 per student. The total cost for all of the students' admission was $320. Mr. Jansen has 16 students in his class. How many students does Mrs. Schmidt have?

a) 27 students **b)** 24 students **c)** 25 students **d)** 22 students

Name:_____ Date:_____

Unit 1- Equations Notes and HW #7 Equation Review

Counts as a Quiz Grade

Keys to Success:

1. **Define your variable.**
2. **Write an expression for each side of the equation.**
3. **Solve your equation.**
   - **a.** Distribute to get rid of the parentheses
   - **b.** Combine like terms (if they are on the same side of the equal sign)
   - **c.** Get variables on one side of equal sign and #'s on the other
   - **d.** Inverse operations – undo addition/subtraction first
   - **e.** Inverse operations – undo multiplication/division last
4. **Check your solution**
5. **Make sure you have answered the question(s).**

Directions: Solve the following equations, show the check when asked.

1. $24 = -6(m+1)+18$ *Check:*

2. $7k-8+2(k+12)=52$

3. $2x-3+4x=39$

4. $3(3a+3)+6=81$ *Check:*

5. $20=-4(f+6)+14$

6. $9a-4=3(3a-11)$

7. You want to join the tennis team. You go to the sporting goods store with $100. If the tennis racket you want costs $80 and the tennis balls cost $4 per can, how many cans of tennis balls can you buy?

8. Johnny wants to ship a package to his friend. A shipping company charges a flat fee of $2.49 and $1.24 for each pound. If it cost Johnny $11.17 to ship the package, how much did his package weigh?

9. $\frac{2}{3}(6x+3)=4x+2$

10. $\frac{2(x-7)}{6}=21$

11. $0.7w+16+4w=27.28$

12. $6(f+5)=2(f-4)$

13. $\frac{2}{5}(5k+35)-8=12$

14. The perimeter of a pool table is 30 ft. The table is twice as long as it is wide. What is the length of the pool table?

15. Two angles are congruent (they are the same measure). One angle is represented by the expression $(1.15+0.8x)°$, and the other angle is $(2.3-1.5x)°$. Write an equation and solve for each angle.

Multiple Choice:

16. Which of the following expressions is equivalent to $3(x+4)-6+5x$?

a) $3x+12-x$ **b)** $8x+6$ **c)** $8x-2$ **d)** $2x+6$

17. Simplify the expression. $-6-7(c+10)$

a) $64-7c$ **b)** $-76-7c$ **c)** $4-13c$ **d)** $-16-13c$

18. Solve: $\frac{1}{4}x+\frac{1}{2}=\frac{1}{4}x-\frac{1}{2}$

a) No solution **b)** 1 **c)** Identity **d)** 2

19. Chose the verbal expression that matches the given algebraic expression.

The variable *s* stands for the number of units in one side of a square. $4s - 4$

a) The perimeter of the square increased by four units.

b) The perimeter of the square decreased by four units.

c) Four times the perimeter of the square increased by four units.

d) The product of four and the perimeter of the square.

20. For what values of *a* and *b* will the equation: $3(2x+15) = ax + b$ have exactly one solution?

a) $a = 6$, $b = 15$

b) $a = 6$, $b = 45$

c) $a = 5$, $b = 60$

d) $a = 5$, $b = x$