Algebra 1 Summer Work

We did not get to *four* important lessons this year in 7th grade math. Because of this, Algebra 1 students will complete these over the summer. I will post four videos for the students to watch and take notes.

Your student should join this google classroom using this link: Algebra 1 Google Classroom
They can also use this code: mzboalyq.

The notes they need are attached. I will give copies to the kids before we dismiss for summer, but if they lose them (what? how could they do that?!), feel free to print them at home. There will not be any extra worksheets to complete; they only need to watch the videos and take the notes. They will be held accountable for completing this *before* the first day of school.

To ensure they remember what they learn in the videos, the videos will not be posted until August 3rd. They should check google classroom then. I expect each lesson to be around 20 minutes.

Please let me know if you have any questions. I will be checking email periodically during the summer and especially once August is here!

Thank you,

Kelly Lincicome

Algebra 1 **Name:**_____

Date:_____

Summer Work Lesson 1

Review

Simplify.

1. $3(4-x)+2x$ 2. $6x+2x-5x$ 3. $-8+2(6x-4)$

For x = -2 and y = 4, find the following.

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

Tell whether the given value is a solution of the equation.

7. $x+5=10;\ \ x=-5$ 8. $\frac{y}{6}=-3;\ \ y=18$ 9. $4x=20;\ \ x=5$

10. $-x+10=2;\ \ x=-8$ 11. $3=n+12;\ n=-9$ 12. $21-z=-4;\ \ z=25$

Solve the equation.

13. $4+x=12$ 14. $\frac{x}{3}=18$ 15. $-2x=-10$

16. $\frac{y}{-4}=12$ 17. $16=8y$ 18. $-17=-5+y$

New Material

Solve the equation.

19. $6x + 2 = 20$

20. $-5 + 5x = 20$

21. $\frac{m}{4} - 21 = -7$

22. $18 - r = 32$

23. $-2 = \frac{t-11}{3}$

24. $-9z + 4 = -5$

Write an equation for the verbal sentence. Then solve the equation.

25. Five minus the product of 2 and a number is 7.

26. Thirty-two minus the product of 9 and a number is 140.

27. Thirteen plus the product of 6 and a number is 67.

28. 45 is the difference of 3 and 2x. What is x?

29. The total cost of repairing a car is the cost for parts and labor. You paid $78 for parts and $45 for each hour of labor. The total cost to repair the car was $168. How many hours did it take to repair the car?

30. A group of 9 friends takes a white-water rafting trip. The total price of the trip before any discounts is $810. Each person in the group receives a student discount. The total price with the discount is $729. How much is the discount per person?

Algebra 1 **Name:**_____
Date:_____

Summer Work Lesson 2

Review
Simplify the expression.
1. $4 - 2x + 5x - 9$ 2. $6 - 3(3x - 1)$ 3. $5x + 2(x - 3) - 4$

Solve the equation.
4. $-3x = -27$ 5. $\frac{x-1}{4} = -3$ 6. $-2 + 8x = -18$

New Material
*Simplifying one side of an equation before we move onto isolating the variable is sometimes necessary to solve an equation.

Solve the equation by combining like terms first.
7. $7n - 1 - 2n = 14$ 8. $12 - 7x + 10x = 18$ 9. $3 - y - 2y - 4 = -7$

Sometimes, we use the _____ property to simplify the equation before we move into _____ the variable.

Use the distributive property to solve the equation.
10. $3(x - 1) = 15$ 11. $5(y - 2) + 6 = 21$

Notes

12. $1 - 3(n + 5) = -8$

13. $6(x - 2) - 76 = -142$

Mixed:

14. $6 = \frac{1}{8}w - \frac{3}{8}w - 4$

15. $9 = -(x - 5) + 11$

16. On his first two social studies tests, Billy made an 86 and a 93. What grade must Billy make on the third test to have an average of 90 for all three tests?

17.On her first three math tests, Sophie made a 95, 86, and 93. What grade must she make on the fourth test to have an average of 91 for all three tests?

Notes

Algebra 1 **Name:**_____

Date:_____

Summer Work Lesson 3

Review

Solve the equation.

1. $5x - 6 = 24$

2. $8 + \frac{x}{3} = -1$

3. $8 = -4x$

4. $3(x + 5) = 23$

5. $5 - 2(2x + 1) = 5$

6. $90 = 45(x - 2)$

New Material

If there is a variable is on both sides of the equation, move them to the same side, and then solve. Remember to keep the equation _____!

Solve the equation.

7. $6m = 4m + 12$

8. $-7x - 198 = 5x$

9. $5x = 3x + 26$

10. $19 + 7x = -2x + 37$

11. $\frac{5}{9}x = \frac{4}{9}x + 9$

12. $\frac{3}{5}x - 2 = \frac{1}{5}x$

Notes

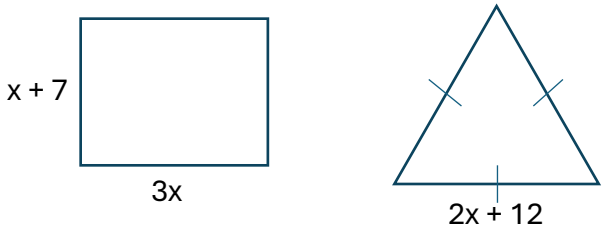
13. $5(x-1)+3=2x$

14. $x+3=2(x-4)$

15. $\frac{x}{5}+\frac{3}{10}=\frac{6}{5}$

16. Mari can buy a video game console for $72.45 and rent a game for $7.95 per week, or she can rent a console and the same game for a total of $22.44 per week. How many weeks would Mari need to rent both the video game and the console to pay as much as she would if she had bought the console and rented the game instead?

17. The figures in the pair have the same perimeter. Find the value of the variable.



Notes

Algebra 1 **Name:**_____
Date:_____

Summer Work Lesson 4

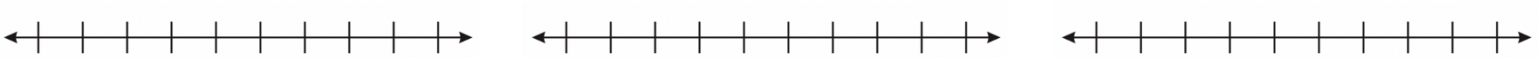
Review
Solve the equation.
1. $4 + 5(x - 1) = 24$ 2. $9x - 4 = 7x + 2$ 3. $18x = 9(2x - 1)$

New Material
Is the given number a solution of $5x - 10 > 2x + 4$?
a. 8 b. 5 c. 4 d. -2

Tips for solving inequalities:
- Solve the inequality just as you would an _____.
- Be careful: when you **multiply** or **divide** both sides of the inequality by a **negative**, you must _____!
- For $\leq$ and $\geq$, use a _____ circle.
- For $<$ and $>$, use an _____ circle.

Graph the inequality.
4. $x \geq 2$ 5. $x < -3$ 6. $x \geq -1$

Solve the inequality. Graph the solution.
7. $m + 5 \geq 10$ 8. $-3 + x < 4$ 9. $-10 > \frac{x-2}{3}$



Notes

10. $-4x < 16$

11. $\frac{x}{10} \leq 4$

12. $12 - 4x \geq 6x + 2$

13. $-4(x - 2) < 16$

14. $3x - 5 \geq 6x + 13$

15. $\frac{n}{-3} + 4 > 5$

Write the verbal sentence as an inequality. Define the variable on #18-19. Then solve.

16. Five times a number is at least 45.

17. Two times a number is at most 8.

18. The speed limit is 55 miles per hour.

19. You must be at least 48 inches to ride.