

A1 S2 w16d2 2018 Final Review 1.notebook

Alg 1 Week 16 Tues Warm Up

1. Skill 19: Multiply and Divide Rational Expressions

Simplify the polynomial completely.

$$\frac{3k + 12}{k + 11} \div \frac{5k + 20}{k^2 - 121}$$

2. Skill 20: Construct a box and whisker plot for a set of data, and find the mean and range.

fundraiser revenue: \$195 \$275 \$295 \$185 \$210 \$115 \$340 \$285 \$195

3. Probability: Using a number cube, find the probability indicated.

a. $P(3)$

b. $P(\text{not } 1)$

4. You spin a spinner that has 8 equal-sized sections numbered 1 to 8.

Find each probability:

a. $P(2 \text{ or } 4)$

b. $P(\text{odd or } 6)$

c. $P(\text{multiple of } 3 \text{ or odd})$

5. Solve: $\frac{5}{x-3} = \frac{2x}{x^2-9}$

Algebra. **CW/HW**

This goes in as a separate grade in Aeries

1st Semester Skills Review

Name: _____ Period _____

Show ALL of the work for each problem.

Skill 1. Solve an Equation

a. $6u - (2u + 6) = 18 - 2(u - 3)$

b. $4a - (3a - 5) = 2(a + 3) + 8$

Skill 2. Solve Proportions

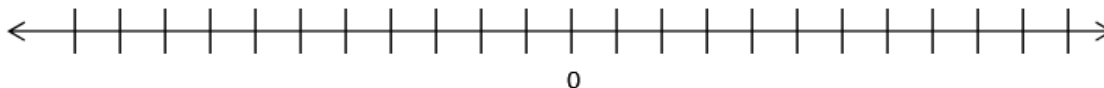
a. A group of 5 vans can shuttle 52 people to the ball park. If you are arranging shuttle service for 328 people, how many vans will be needed? Round to the nearest van.

b. Looking back on your online bank statement, you see that you have spent \$56.78 at Starbuck's over the last 5 weeks. If you continue at this rate, how much should you budget over the next 18.5 weeks? Round your answer to the nearest cent.

Skill 3. Solve and Graph Compound Inequalities on a Number Line

a. Solve the inequality and then graph the solution on the number line.

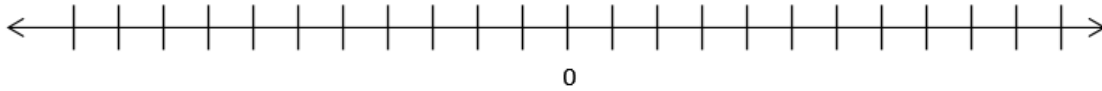
$$-11 < 5 - 4v \leq 9$$



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b. Solve the inequality and then graph the solution on the number line.

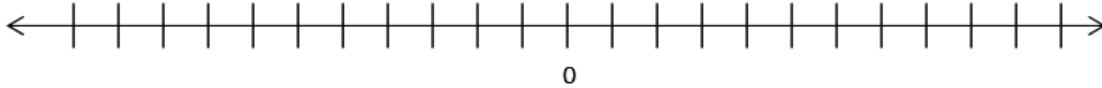
$$-c + 5 > 6 \text{ or } -7 + 3c \geq 5$$



Skill 4. Solve and Graph Absolute Value Inequalities and Equations

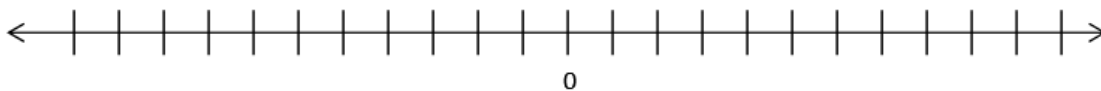
a. Solve and show all your steps. State the solution and then graph the solution set on the number line.

$$|2x - 3| \geq 11$$



b. Solve and show all your steps. State the solution and then graph the solution set on the number line.

$$|4x + 2| < 10$$

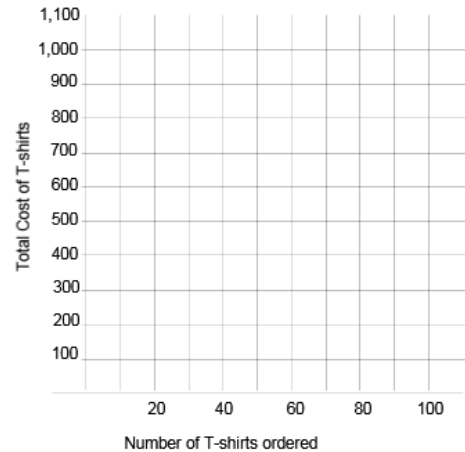


Skill 5. Graph and Interpret Functions

- a. Placerville T-shirt Factory will set up and print T-shirts for your company or event. They charge \$90 to set up the equipment and \$10 per T-shirt that you order. The function that represents this situation is $C(t) = 10t + 90$, where C represents the total cost and t represents the number of T-shirts printed.

Draw a graph using the function above.

t	C

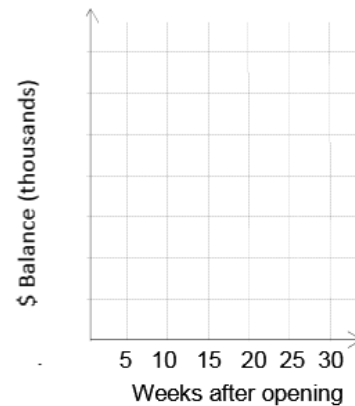


Use your graph to find how many T-shirts were ordered if the cost of an order was \$575.

- b. A new frozen yogurt store loses money for several weeks. As word gets out about their fantastic product, the store eventually starts making money. Their bank account's weekly balance b (in thousands of dollars) can be modeled by the function $b(w) = |w - 20|$ where w is the amount of weeks after opening.

Graph the function and answer the question below.

Domain	Range



Use your graph to determine at what week the store started **making** \$10,000 .

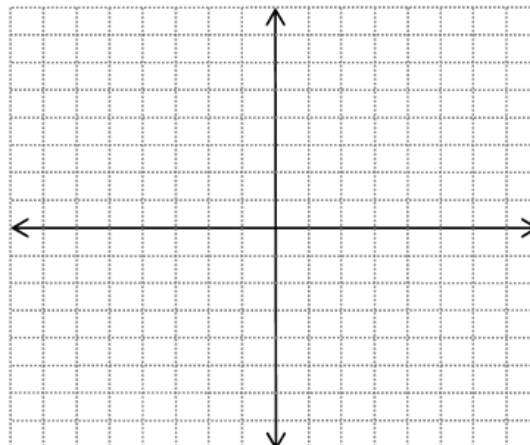
Skill 8. Write the Equation of a Line Parallel or Perpendicular to a Line Given a Point

- a. Write the equation of the line (in slope-intercept form) perpendicular to $y = \frac{2}{5}x + 2$ and passing through the point $(6, -7)$.
- b. Write the equation of the line (in slope-intercept form) parallel to $y = \frac{6}{5}x + 8$ and passing through the point $(-10, 0)$.

Skill 9. Solve a System of Linear Equations by Graphing

- a. Solve the system by graphing. Identify the point of intersection on your graph and check your solution.

$$y = 3x + 1$$
$$-6x + 2y = -10$$



Point of intersection: _____

Check: