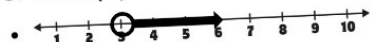
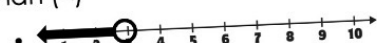
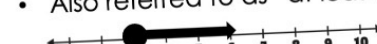
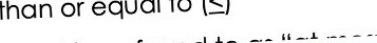
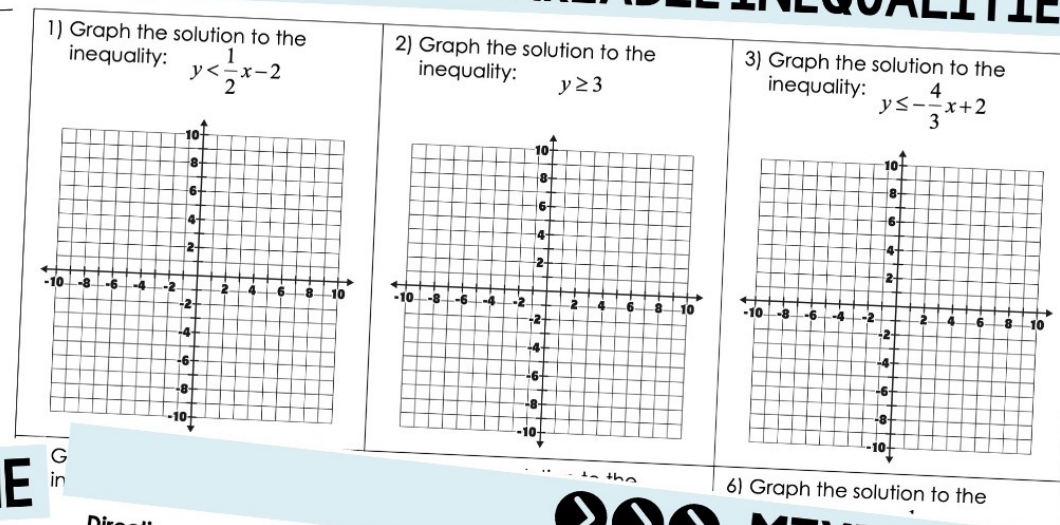


Algebra 1 PREP PACKET

THINGS YOU NEED TO KNOW

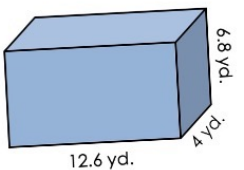
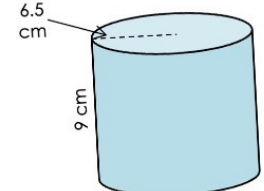
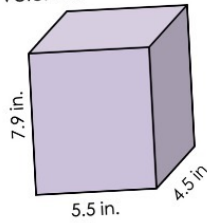
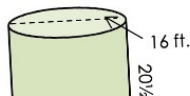
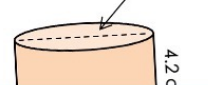
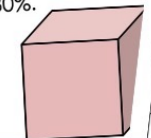
Inequalities

- Greater than ($>$)
 $x > 3$
- Less than ($<$)
 $x < 3$
- Greater than or equal to ($\geq$)
• Also referred to as "at least" or "no less than".
 $x \geq 3$
- Less than or equal to ($\leq$)
• Also referred to as "at most" or "no more than".
 $x \leq 3$



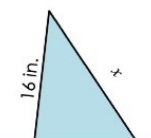
SURFACE AREA AND VOLUME

Directions: Round to the nearest hundredth if needed. Use 3.14 for π .

- Find the surface area.

- Find the volume.

- Find the volume.

- Find the surface area.

- Find the volume when filled halfway.

- Find the volume of the cut when filled 80%.


MIXED REVIEW

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

- After 6 years at a 1.5% interest rate, an account has earned \$576 in interest. How much was the initial deposit?
- Find x .
 $\frac{2}{x} = \frac{15}{40}$
- How do you find the mode of a set of data?
- Solve.
 $x - 3(x + 2) + (-2) = 42$
- Simplify.
 $4y + 2(3y - 12x) + 6x$
- Find the perimeter.


PRINTABLE & EDITABLE

IDEAL FOR ALGEBRA, 8TH-GRADE, OR PRE-ALGEBRA TEACHERS, THIS PACKET SERVES AS A VALUABLE SUMMER ASSIGNMENT OR END-OF-YEAR SKILLS REVIEW. WITH 34 PAGES COVERING 20 ESSENTIAL TOPICS, THIS EDITABLE CONTENT OFFERS FLEXIBILITY AND CUSTOMIZATION OPTIONS TO SUIT YOUR CLASSROOM REQUIREMENTS.

learn more!

Topics Covered:

- Simplifying expressions
- Evaluating expressions
- Percents
- Using formulas
- Graphing in a coordinate plane
- Graphing Inequalities in a coordinate plane
- Scale & Proportions
- Solving equations
- Measures of central tendency
- Area, circumference & perimeter
- Writing equations of lines
- Solving Inequalities
- Surface area and volume
- Pythagorean theorem
- Order of operations
- Mixed Review

ORDER OF OPERATIONS

Directions: Simplify each expression. Round to the nearest hundredth if needed.

1) $4^2 + 2(6) - 8$	2) $9 \div 3 + 6 \cdot 2 \div 2^2$	3) $20 - 4(4) - 2 + 6$
4) $9 - 6 + 2(3^2 + 4)$	5) $-10 + 4(3 - 8) + 2^2$	6) $5^2 + 6(2 \cdot 6 \div 3) - 4^2$
7) $12 - 3^2(8 - 4 \cdot 5)$	8) $-10 + 3(12 \div 6 \cdot -2)^2$	9) $2.2 \cdot 9 + 8 \div 0.4 - 6$

EVALUATING EXPRESSIONS

Directions: Evaluate each expression for the given value(s).

1) $3x - 10 + 4; x = 3$	2) $\frac{x}{2} + 6x; x = -12$	3) $8(x - y); x = 2, y = 6$	4) $x + xy; x = 3, y = -2.5$
5) $(2x)^2 + 6; x = -2$	6) $3x + 4y; x = 2, y = 4$	7) $-10x + \frac{4}{x}; x = -2$	8) $3(8x - 10) + 5x; x = \frac{1}{2}$

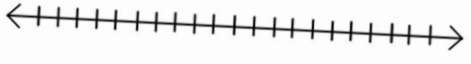
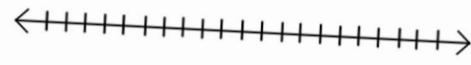
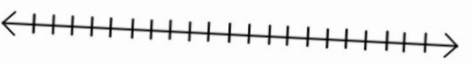
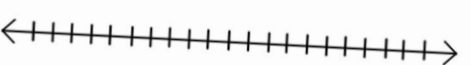
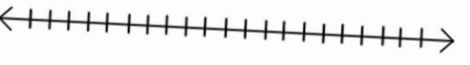
SOLVING EQUATIONS

Directions: Solve each equation. Round to the nearest tenth if needed.

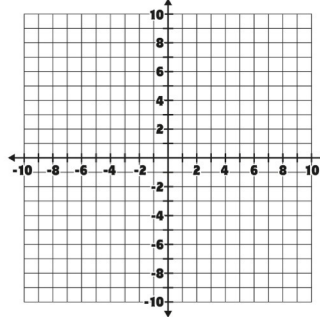
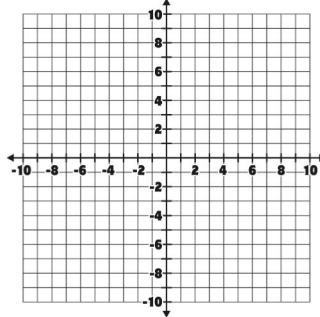
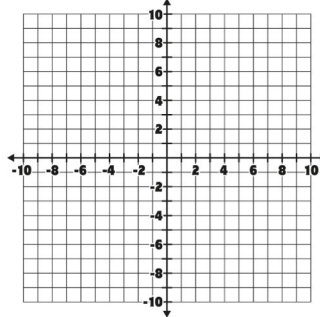
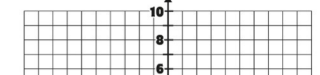
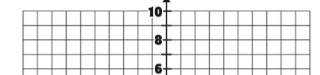
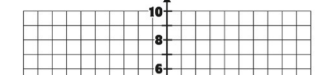
1) $3x + 6 = 20$	2) $-\frac{3}{4}x + 6 = 5\frac{5}{16}$	3) $7x + 5 = 68$	4) $-\frac{7}{8} + 5x = 44\frac{1}{8}$
5) $-2x - 5 = -23$	6) $7x + 6 + x = 62$	7) $6 + 3x - 6x = -18$	8) $-6.5x + 1 = -29$
9) $3x - 4(8x - 6) = 20$	10) $6x + 7 =$		
13) $3x - 2 - 7x = -22$	14) $-54 = 2x$		
17) $\frac{1}{5}(x + 10) + 5x = 25$	18) $-4(2 - 8$		

SOLVING INEQUALITIES

Directions: Solve each inequality. Round to the nearest tenth if needed.

1) $-7x + 6 \leq 20$ 	2) $-3x + 6 > 5$ 
3) $2x - 7 > -21$ 	4) $3 + 3x - 6x \leq -12$ 
6) $-5 - 2x \geq -21$ 	
9) $\frac{1}{2}(-6x + 2) + 4x \geq 10$	10) $2(2x - 4) - 5(-4x) \leq -20$
13) $5 + 3x \leq 15 + x$	14) $6x + 4 < 30$

GRAPHING LINEAR EQUATIONS

1) Graph the equation: $y = \frac{1}{2}x + 4$ 	2) Graph the equation: $y = -4$ 	3) Graph the equation: $y = -\frac{2}{3}x$ 
4) Graph the equation: $y = -\frac{5}{4}x + 5$ 	5) Graph the equation: $x = 6$ 	6) Graph the equation: $y = \frac{1}{3}x - 3$ 

SCALE AND PROPORTIONS

Directions: Find each missing value. Round to the nearest tenth if needed.

1) Find the missing value.

$$\frac{3}{5} = \frac{15}{x}$$

2) Find the missing value.

$$\frac{x}{6} = \frac{15}{20}$$

3) Find the missing value.

$$\frac{2}{8} = \frac{x}{7}$$

4) Find the missing value.

$$\frac{12}{x} = \frac{5}{1}$$

AREA, CIRCUMFERENCE & PERIMETER

Directions: Round to the nearest hundredth if needed. Use 3.14 for π .

1) Farmer Johnson is fencing in an area for his horses. The field measures 150 feet by 165.5 feet. How much fencing will he need?

If fencing costs \$1.50 per foot. How much will he need to pay?

2) A circular pool needs a cover. If the pool has a radius of 6.75 feet, what will the area of pool cover be?

THE PYTHAGOREAN THEOREM

Directions: Round to the nearest hundredth if needed.

1) In a right triangle, find the measure of b if a = 12 inches and c = 16 inches.

2) In a right triangle, find the measure of a if b = 14 centimeters and c = 20 centimeters.

3) In a right triangle, find the measure of c if a = 6.5 meters and b = 8 meters.

MIXED REVIEW

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

1) You put \$500 in the bank for 2 years with a 3.2% interest rate. How much interest is earned?

2) Find x.

$$\frac{4}{9} = \frac{10}{x}$$

3) How do you find the range of a set of data?

4) Solve.

$$-4(x+2)+x(-4)=42$$

5) Simplify.

$$\frac{2}{3}(3x-6)$$

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

1) After 6 years at a 1.5% interest rate, an account has earned \$576 in interest. How much was the initial deposit?

2) Find x.

$$\frac{2}{x} = \frac{15}{40}$$

3) How do you find the mode of a set of data?

8) Graph the

MEASURES OF CENTER

Directions: Read each problem carefully. Round to the nearest tenth if necessary.

Use the test scores to answer questions 1 – 4.

62	80	65	75	99	80	100	98	65	57
46	87	80	90	72	98	82	65	66	84

1) What is the average test score?

2) What is the mode of the test scores?

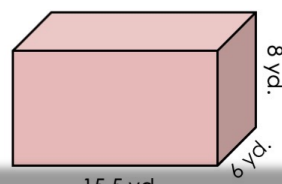
3) What is the range of the test scores?

4) What is the median test score?

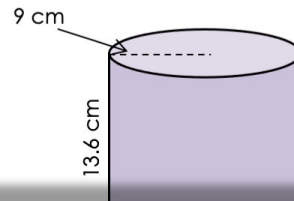
SURFACE AREA AND VOLUME

Directions: Round to the nearest hundredth if needed. Use 3.14 for π .

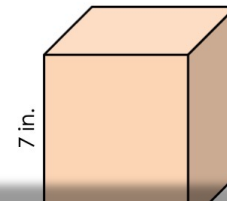
1) Find the surface area.



2) Find the volume.



3) Find the volume.



MIXED REVIEW

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

1) Simplify.

$$-2(5x+3y)-2(3x-y)$$

2) Solve.

$$-8+3x-6=-2$$

3) Solve $x+xy$

$$\text{if } x = \frac{1}{2}, y = 2.5$$

MIXED REVIEW

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

1) Simplify.

$$\frac{1}{5}(5x+2y)-\frac{1}{2}(6x-2y)$$

2) Solve.

$$-14x+2+6x=-2$$

3) Solve $|x+xy|$

$$\text{if } x = -4, y = 0.5$$

MIXED REVIEW

Directions: Read each problem carefully. Round to the nearest hundredth if needed.

1) After 6 years at a 1.5% interest rate, an account has earned \$576 in interest. How much was the initial deposit?

2) Find x.

$$\frac{2}{x} = \frac{15}{40}$$

3) How do you find the mode of a set of data?

SIMPLIFYING EXPRESSIONS

Directions: Simplify each expression.

1) $|15-4| \cdot 2$

2) $|5+2|-3$

3) $|42-8|$

4) $|3 \cdot 2| + 6 - 9$

WRITING EQUATIONS

Directions: Write the equation represented by each situation.

1) Carl makes \$10.25 per hour, h , plus a daily bonus of \$25. Write an equation that represents his total earnings, t , each day.

2) It costs \$10 to enter a theme park and \$2 for each ticket, t . Write an equation that represents the total cost, c , of going to the theme park.

3) James has \$150 in savings and earns an additional amount per week, w , cutting grass. Write an equation that represents the total, t , in his account.

FORMULAS

Directions: Read each problem carefully. Round to the nearest hundredth if necessary. Use the formula $d = rt$ for questions 1 – 4.

1) Alex travels 46 miles per hour for 3.2 hours. How far has he gone?

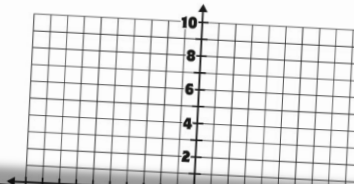
2) Ben just drove 426 miles in 6.4 hours. What was his average rate of speed?

3) Mia is driving at a constant speed of 55 mph and drives 236.5 miles. How long was she driving?

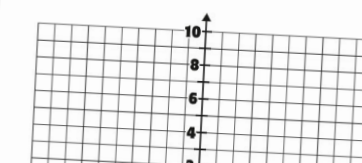
4) Eric drives 62 mph for $5\frac{1}{4}$ hours. How far does he drive?

GRAPHING TWO-VARIABLE INEQUALITIES

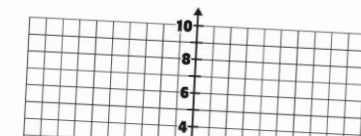
1) Graph the solution to the inequality: $y < \frac{1}{2}x - 2$



2) Graph the solution to the inequality: $y \geq 3$



3) Graph the solution to the inequality: $y \leq -\frac{4}{3}x + 2$



Printable and Editable {must have PowerPoint to edit}

Teacher Reviews

I used this for small group summer math tutoring/ Alg. 1 prep. My students enjoyed it as a quick but meaningful review of the previous year. We were able to cover a lot of ground in a short period of time. I loved not having to do all the prep.

Fabulous instructional material. Engagement with students was great and they weren't scared to proceed with their learning

I provided this for all my students last summer. It was easy to tell the ones who completed this and the ones who did not. This prepares students so well for algebra 1.

I used this with my honors 7th grade students who will be taking Algebra 1 as 8th graders. We used it in May and took several days in class to go over it. It was very valuable and I think they students would say they feel more prepared to go into Algebra 1 now.

I gave this packet to my graduating 8th graders to work on over the summer, (before 9th grade). This was exactly what they needed! Thank you.

Let's Connect!



www.facebook.com/BeyondTheWorksheet



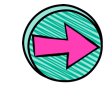
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