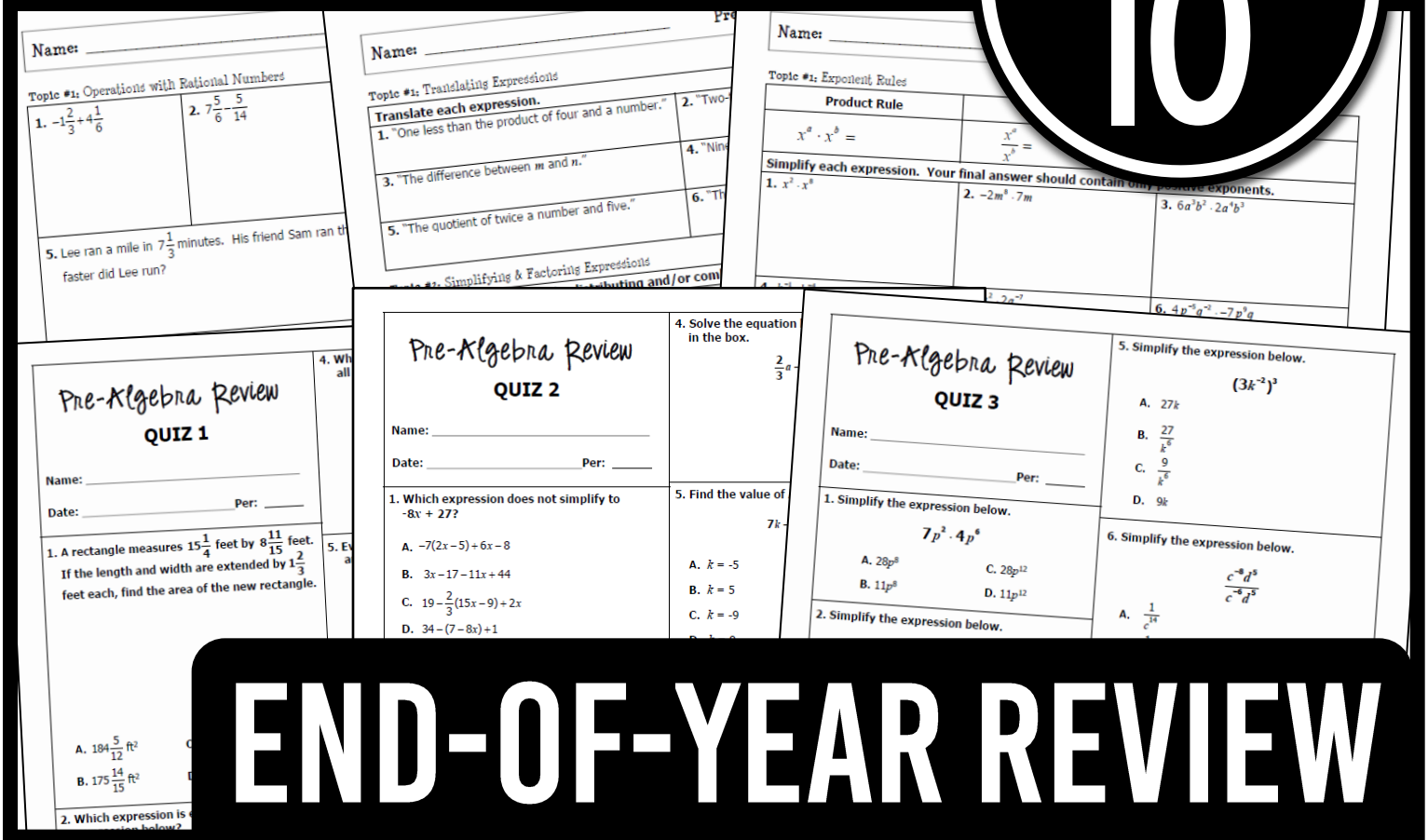
PRE-ALGEBRA

Unit 10



END-OF-YEAR REVIEW

REVIEW PACKETS • MINI-QUIZZES

Created by: ALL THINGS ALGEBRA®

PRE-ALGEBRA REVIEW PACKETS & QUIZZES

Packet 1 (The Real Numbers)

- Exponents, Negative Exponents, Zero Exponent
- Perfect Squares & Square Roots
- Perfect Cubes & Cube Roots
- Scientific Notation vs. Standard Form
- Classifying the Real Numbers
- Comparing & Ordering Numbers (written in various forms)
- Order of Operations
- Evaluating Expressions
- Properties

Quiz 1

Packet 2 (Expressions, Equations, & Inequalities)

- Translating Expressions
- Simplifying Expressions (Distribute and/or Combine Like Terms)
- Factoring Expressions (Finding the Greatest Common Factor)
- Solving Two-Step & Multi-Step Equations
- Equations with Special Solutions
- Translating Equations
- Equation Word Problems
- Solving Two-Step & Multi-Step Inequalities
- Graphing Inequalities
- Translating Inequalities
- Inequality Word Problems

Quiz 2

Packet 3 (Exponent Rules & Scientific Notation)

- *Multiplying Monomials (Product Rule)
- *Dividing Monomials (Quotient Rule)
- *Powers of Monomials (Power Rule)
- Multiplying & Dividing Numbers in Scientific Notation
- Adding & Subtracting Numbers in Scientific Notation
- Applications with Scientific Notation

*includes expressions with negative exponents

Quiz 3

Packet 4 (Ratios, Proportions, & Percents)

- Ratios & Rates
- Solving Proportions
- Proportion Word Problems
- Scale Drawings & Models
- Similar Figures
- Indirect Measurement
- Percent Proportion
- Discount, Mark-up, Sales Tax, and Tip Problems
- Percent Increase and Percent Decrease
- Simple Interest

Quiz 4

Packet 5 (Functions & Linear Relationships)

- Relations vs. Functions
- Domain and Range
- Slope (Given a Graph)
- Slope (Given Two Ordered Pairs)
- Slope Applications
- Slope-Intercept Form
- Slope-Intercept Form Applications
- Standard Form
- Linear vs. Nonlinear Functions
- Proportional Relationships (Direct Variation)

Quiz 5

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Packet 6 (Systems of Equations)

- Writing a System of Equations given a Graph
- Solving Systems of Equations Graphically
- Solving Systems of Equations Algebraically (Substitution/Elimination)
- Special Cases: No Solution/Infinite Solution
- Systems of Equations Applications

Quiz 6

Packet 7 (Basic Geometry Concepts)

- Angle Relationships (Vertical, Adjacent, Complementary, Supplementary)
- Parallel Lines Cut by a Transversal
- Pythagorean Theorem & Converse
- Pythagorean Theorem Word Problems
- Sum of the Interior Angles of a Polygon
- Properties of Quadrilaterals/Classifying Quadrilaterals
- Congruent Polygons

Quiz 7

Packet 8 (Transformations)

- Reflections
- Translations
- Rotations
- Dilations
- Identifying Transformations
- Writing Transformation Rules

Quiz 8

Packet 9 (Measurement: Area & Volume)

- Area and Perimeter of Composite Figures
- Area of Shaded Regions
- Area and Perimeter of Similar Figures
- Cross Sections of 3D Figures
- Volume of Prisms, Cylinders, Pyramids, Cones, and Spheres
- Surface Area of Prisms, Cylinders, Pyramids, Cones, and Spheres
- Effects of Changing Dimensions
- Volume and Surface Area of Similar Solids

Quiz 9

Packet 10 (Probability & Statistics)

- Theoretical vs. Experimental Probability
- Counting Principle
- Compound Probability: Independent Events
- Compound Probability: Dependent Events
- Measures of Central Tendency
- Mean Absolute Deviation
- Box-and-Whisker Plots
- Scatter Plots & Line of Best Fit
- Two-Way Tables & Relative Frequency

Quiz 10

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Includes

EDITABLE QUIZZES

Name: _____ Pre-Algebra Review: Packet #1

Topic #1: Operations with Rational Numbers

1. $-1\frac{2}{3}+4\frac{1}{6}$
2. $7\frac{5}{6}-\frac{5}{14}$
3. $-3\frac{7}{12}-\frac{6}{7}$
5. Lee ran a mile in $7\frac{1}{3}$ minutes. His friend Sam ran the same mile in 8 faster did Lee run?
6. Holly has $45\frac{5}{16}$ pounds of fer on her back lawn, how much
7. A large container contains 41 holding $3\frac{1}{8}$ cups of lemonade

Topic #2: Exponents and Scient

Negative Exponent Rule:

Pre-Algebra Review

QUIZ 1

Name: _____

Date: _____ Per: _____

1. A rectangle measures $15\frac{1}{4}$ feet by $8\frac{11}{15}$ feet.

Name: _____ Pre-Algebra Review: Packet #2

Topic #1: Exponent Rules

Product Rule	Quotient Rule
$x^a \cdot x^b =$	$\frac{x^a}{x^b} =$

Simplify each expression. Your final answer should contain only posi

1. $x^2 \cdot x^8$
2. $-2m^8 \cdot 7m$

Name: _____ Pre-Algebra Review: Packet #3

Topic #1: Translating Expressions

Translate each expression.

1. "One less than the product of four and a number."
2. "Two-thirds of a number increas
3. "The difference between m and n."
4. "Nine subtracted from a numbe
5. "The quotient of twice a number and five."
6. "The sum of one-fourth of a nu

Topic #2: Simplifying & Factoring Expressions

fy each expression by distributing and/or combining

+ 9)
8. $-3(4c-1)$

Pre-Algebra Review

QUIZ 3

Name: _____

Date: _____ Per: _____

1. Simplify the expression below.

$7p^2 \cdot 4p^6$

5. Simplify the expression bel

$(3k^{-2})^3$

A. $27k$

B. $\frac{27}{k^6}$

C. $\frac{9}{k^6}$

D. $9k$

6. Simplify the expression be

Name: _____ Pre-Algebra Review: Packet #4

Topic #1: Ratios & Rates

Use for questions 1 and 2: There are 30 freshm 7 sophomores, 25 juniors d senio the marching band. Find each ratio and give y answ in simplest form.

1. What is the ratio of freshman to seniors? your answer in simplest form.

Wh the ratio of juniors the to num of

3. Tessa burned 357 calories in 42 minutes on the elliptical. Ashley only spent 30 minutes on the elliptical and burned 267 calories. Who burned calories at a faster rate?

4. Mr. Rickman filled his tank with 16 gallons of gas for $35.04. Later that day, his wife filled her tank with 18 gallons of gas for $39.96 at a different gas station. Who got the better deal?

+ 4)

Pre-Algebra Review

QUIZ 4

Name: _____

Date: _____ Per: _____

1. A snowstorm brought 22 inches of snow to Buffalo in 12 hours, then 2 feet of snow to Rochester in 14 hours. Syracuse got 4 inch less snow than Buffalo in 8 hours. Which city had a heavier snowfall rate?

A. Buffalo
B. Rochester
C. Syracuse
D. It was the same for all three cities.

2. Solve the proportion below. Write your answer in the box.

$$\frac{3.5}{20} = \frac{9.1}{x}$$

$x =$

3. Alana drove 1,400 miles from Detroit to Miami. If her car averages 28 miles per gallon and the capacity of her gas tank is 24 gallons, how many times did she have t fill up her gas tank along the way, assumin she started with an empty tank?

A. 1 time
B. 2 times
C. 3 times
D. 4 times

4. The scale on a map reads $\frac{3}{4}$ inch = 50 miles.

8. Jordan's fish tank was only 62.5% full so he added some water to it so it got to 80% full. If the tank now has 40 gallons of water in it, how many gallons did he add?

A. 8.25 gallons
B. 8.5 gallons
C. 8.75 gallons
D. 9 gallons

9. Ella bought a $379 tablet for 15% off. The next day, she saw that it was marked down an additional 20% off the sale price. How much more money would she have saved by waiting a day to purchase the tablet?

A. $18.95
B. $24.52
C. $48.16
D. $64.43

10. Mr. Hillman is buying boxes of colored pencils for his classroom. They regularly cost $1.80 each but are on sale for 30% off. If sales tax is 6% and he has a $40 budget, how many boxes can be buy?

A. 27 boxes
B. 28 boxes
C. 29 boxes
D. 30 boxes

11. The bill for a group of eight people at a restaurant came to $196. Because they are a large party, the restaurant also adds an 18% tip on top of this. If they decide to equally split the bill, including the tip, how much will each person pay?

A. $28.91
B. $29.35
C. $30.77
D. $31.08

12. When Martin salary was $4 was $72,000 of his salary your answer

13. The table belo 2015 and the four different greatest perce 2015 to 2016?

City	
Greystone	
Sierra	
Lakeville	
Ashland	

A. Greystone
B. Sierra
C. Lakeville
D. Ashland

14. Stacy put $65 7% simple int she have in th

A. $910
B. $1,560
C. $1,820
D. $1,995

15. Ian took out a to purchase a interest rate i save if he pay instead of the

A. $2,190
B. $2,430
C. $2,550
D. $2,620

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Name: _____ Pre-Algebra Review: Packet #

Topic #1: Relations & Functions

Identify the domain and range of each relation, then determine if the relation is a function.

1. {(-7, -1), (-4, 2), (0, 5), (4, -1)}

Domain: _____
Range: _____
Function? _____

2.

x	y
2	-4
-5	2
9	0
2	-1
1	4

Domain: _____
Range: _____
Function? _____

3.

Domain: _____
Range: _____
Function? _____

Topic #2: Equations as Functions

Given the function and its domain, find the range.

4. $y = -4x + 5$; domain = {-7, -1, 2}
5. $y = \frac{3}{2}x - 1$; domain = {-10, -6, -2}

Complete each function table, then graph.

6. $y = -2 - x$

x	y
-5	
-3	
1	
4	

7. $y = 1 - \frac{2}{3}x$

x	y
-6	
-3	
0	
6	

Topic #3: Slope

Find the slope of the line given the graph.

8. 9. 10. 11.

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Pre-Algebra Review

QUIZ 5

Name: _____

Date: _____ Per: _____

1. Which relation represents a function?

A.

x	1	1	1	1
y	-2	0	2	4

B.

x	0	2	4	2
y	-4	-3	-2	-1

C.

x	-5	-4	-3	-5
y	3	3	3	3

D.

x	-3	-1	0	4
y	-3	-1	0	4

2. Which value is not in the range of the relation shown below?

A. -3
B. -1
C. 1
D. 2

3. What is the slope of the line on the graph?

A. -1
B. 1
C. 0
D. undefined

4. Find the slope of the line that passes through the points (2, -1) and (-2, 9). Write your answer as a fraction in simplest form.

5. Find the slope of the line that passes through the points (-6, 5) and (-6, 8).

A. -1/4
B. 1/4
C. 0
D. undefined

6. At 11:59 p.m. on December 31st, the Times Square Ball in New York City was 725 feet above ground. One minute later, it was 584 feet above ground. Which of the following gives the rate of change of the ball in feet per second?

A. 2.35 ft/s
B. -2.35 ft/s
C. 2.82 ft/s
D. -2.82 ft/s

7. Which equation best represents the line shown on the graph?

A. $y = -4 - \frac{1}{2}x$
B. $y = -4x + 2$
C. $y = \frac{1}{2}x - 4$
D. $y = 2x - 4$

8. Which graph best represents the equation $4x + 6y = 12$?

A. C. B. D.

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