



Algebra 1 Summer Review

For students who have *completed* Pre-Algebra and are **entering** Algebra 1

Reviewing key concepts from Pre-Algebra is an excellent way to be fully prepared for the pace and rigor of Algebra 1. The following packet will help you practice and self-assess any concepts that you may want to spend extra time on before the start of school. **You should not use any type of calculator while doing these problems.**

You will take a low-stakes diagnostic quiz on this material to identify any gaps in critical concepts. You will be given additional assignments to help you learn the material until you can demonstrate mastery. If you would like additional resources to support your practice, we recommend Khan Academy as a great first step.

Summer Review

Date _____ Period _____

Evaluate each expression.

1) $2 \times 6 \times 2$

2) $2(6 - 1)$

Solve each equation.

3) $-16n = 224$

4) $0 = -20 + m$

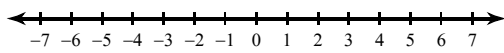
5) $8x - 16 = -(-4 + 2x)$

6) $-4(k + 5) + 3 = -10 - 4k$

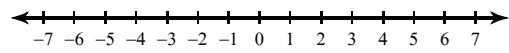
$$7) 7(a - 5) = -35 + 7a$$

Draw a graph for each inequality.

$$8) x > 2$$



$$9) p \leq 6$$



Simplify each expression.

$$10) r + 2 + 3r - 3$$

$$11) 10v + 9v$$

$$12) 4(-3n - 10) + 4$$

$$13) 4 - 7(-5 + 5x)$$

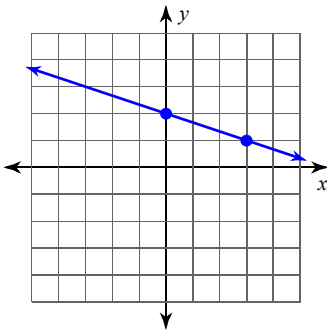
Solve each equation.

14) $\frac{4}{3}k = \frac{4}{3}$

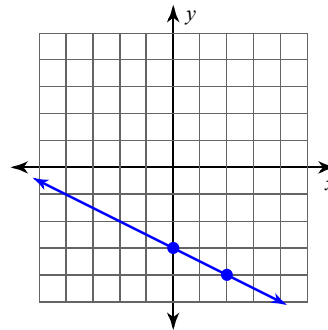
15) $\frac{41}{10}r = \frac{41}{14}$

Find the slope of each line.

16)



17)



Solve each equation.

18) $4 - 4(4m + 1) = -112$

19) $224 = -6 - 5(3 - 7k)$

Simplify. Your answer should contain only positive exponents.

20) $4x^3y^4 \cdot 3x^0y^0$

21) $4a^{-4}b^{-3} \cdot 4a^3b^4$

22) $\frac{3x^{-3}y^{-2}}{2y^3 \cdot 3x^0y^{-1}}$

23) $\frac{3x^3y^{-2} \cdot 3x^{-4}y^{-3}}{4x^{-1}y^3}$

Find the slope of the line through each pair of points.

24) $(-12, -4), (-8, 16)$

25) $(-12, -2), (17, 13)$

Simplify.

26) $\sqrt{36}$

27) $\sqrt{12}$

Evaluate each expression.

$$28) \left(-2\frac{7}{8}\right) + 3\frac{1}{2}$$

$$29) 1 - 4\frac{3}{4}$$

Find each product.

$$30) \left(3\frac{2}{3}\right)\left(-\frac{2}{3}\right)$$

Find each quotient.

$$31) \frac{\frac{4}{9}}{2\frac{1}{2}}$$

Summer Review

Date _____ Period _____

Evaluate each expression.

1) $2 \times 6 \times 2$

24

2) $2(6 - 1)$

10

Solve each equation.

3) $-16n = 224$

 $\{-14\}$

4) $0 = -20 + m$

 $\{20\}$

5) $8x - 16 = -(-4 + 2x)$

 $\{2\}$

6) $-4(k + 5) + 3 = -10 - 4k$

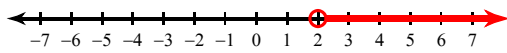
No solution.

$$7) 7(a - 5) = -35 + 7a$$

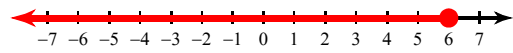
{ All real numbers. }

Draw a graph for each inequality.

$$8) x > 2$$



$$9) p \leq 6$$



Simplify each expression.

$$10) r + 2 + 3r - 3$$

$$4r - 1$$

$$11) 10v + 9v$$

$$19v$$

$$12) 4(-3n - 10) + 4$$

$$-12n - 36$$

$$13) 4 - 7(-5 + 5x)$$

$$39 - 35x$$

Solve each equation.

14) $\frac{4}{3}k = \frac{4}{3}$

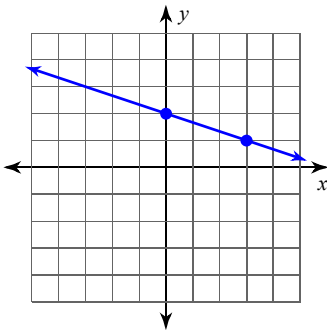
{1}

15) $\frac{41}{10}r = \frac{41}{14}$

{ $\frac{5}{7}$ }

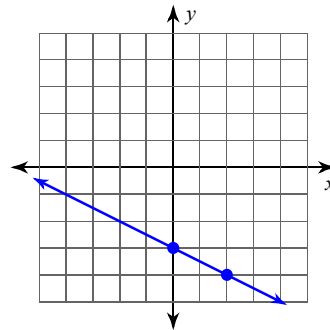
Find the slope of each line.

16)



$-\frac{1}{3}$

17)



$-\frac{1}{2}$

Solve each equation.

18) $4 - 4(4m + 1) = -112$

{7}

19) $224 = -6 - 5(3 - 7k)$

{7}

Simplify. Your answer should contain only positive exponents.

$$20) 4x^3y^4 \cdot 3x^0y^0$$
$$12x^3y^4$$

$$21) 4a^{-4}b^{-3} \cdot 4a^3b^4$$
$$\frac{16b}{a}$$

$$22) \frac{3x^{-3}y^{-2}}{2y^3 \cdot 3x^0y^{-1}}$$
$$\frac{1}{2x^3y^4}$$

$$23) \frac{3x^3y^{-2} \cdot 3x^{-4}y^{-3}}{4x^{-1}y^3}$$
$$\frac{9}{4y^8}$$

Find the slope of the line through each pair of points.

$$24) (-12, -4), (-8, 16)$$
$$5$$

$$25) (-12, -2), (17, 13)$$
$$\frac{15}{29}$$

Simplify.

$$26) \sqrt{36}$$
$$6$$

$$27) \sqrt{12}$$
$$2\sqrt{3}$$

Evaluate each expression.

$$28) \left(-2\frac{7}{8}\right) + 3\frac{1}{2}$$

$$\frac{5}{8}$$

$$29) 1 - 4\frac{3}{4}$$

$$-\frac{15}{4}$$

Find each product.

$$30) \left(3\frac{2}{3}\right)\left(-\frac{2}{3}\right)$$

$$-\frac{22}{9}$$

Find each quotient.

$$31) \frac{\frac{4}{9}}{2\frac{1}{2}}$$

$$\frac{8}{45}$$