

Name:

Key

Algebra 1 Plus Midyear Review 2018-2019

Simplify the following. Show all work. Circle your answers.

1.) $3.12 + 4.39$

$$\begin{array}{r} 3.12 \\ + 4.39 \\ \hline 7.51 \end{array}$$

2.) $2.36 + 9.21$

$$\begin{array}{r} 2.36 \\ + 9.21 \\ \hline 11.57 \end{array}$$

3.) $5.69 - 3.33$

$$\begin{array}{r} 5.69 \\ - 3.33 \\ \hline 2.36 \end{array}$$

4.) $6.58 - 2.72$

$$\begin{array}{r} 6.58 \\ - 2.72 \\ \hline 3.86 \end{array}$$

5.) 2.3×1.7

$$\begin{array}{r} 2.3 \\ \times 1.7 \\ \hline 161 \\ 230 \\ \hline 3.91 \end{array}$$

6.) $14.8 \div 4$

$$\begin{array}{r} 3.7 \\ 4 \overline{) 14.8} \\ \underline{12} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

7.) $\frac{2}{3} + \frac{1}{2}$

LCM: 6

$$\frac{4}{6} + \frac{3}{6}$$

$$= \frac{7}{6} \text{ OR } 1\frac{1}{6}$$

8.) $\frac{4}{5} - \frac{1}{2}$

LCM: 10

$$\frac{8}{10} - \frac{5}{10}$$

$$= \frac{3}{10}$$

9.) $\frac{1}{4} \cdot \frac{2}{5}$

$$\frac{2}{20} = \frac{1}{10}$$

10.) $\frac{1}{5} + \frac{2}{9}$

$$\frac{1}{5} \cdot \frac{9}{2} = \boxed{\frac{9}{10}}$$

Simplify each fraction completely.

11.) $\frac{2}{16} \div 2 = \boxed{\frac{1}{8}}$

12.) $\frac{6}{24} \div 6 = \boxed{\frac{1}{4}}$

13.) $\frac{12}{48} \div 12 = \boxed{\frac{1}{4}}$

14.) Which fraction is equivalent to $\frac{3}{7}$? Explain how you know.

a.) $\frac{6}{21}$

b.) $\frac{1}{4}$

c.) $\frac{9}{27}$

d.) $\frac{15}{35}$

$$\frac{3 \times 5}{7 \times 5} = \frac{15}{35}$$

Solve each. Circle your final answer.

15.) $2x - 6 = 10$

$$\begin{array}{r} +6 +6 \\ \hline 2x = 16 \\ \hline \frac{2}{2} \quad \frac{2}{2} \\ \hline \boxed{x=8} \end{array}$$

16.) $-3(2x + 1) = 15$

$$\begin{array}{r} -6x - 3 = 15 \\ +3 +3 \\ \hline -6x = 18 \\ \hline \frac{-6}{-6} \quad \frac{-6}{-6} \\ \hline \boxed{x=-3} \end{array}$$

17.) $-5(x - 3) = -4x + 21$

$$\begin{array}{r} -5x + 15 = -4x + 21 \\ +5x \quad +5x \\ \hline 15 = x + 21 \\ -21 \quad -21 \\ \hline \boxed{-6 = x} \end{array}$$

18.) $r + 3 = -5 + 3r$

$$\begin{array}{r} 3 = -5 + 4r \\ +5 +5 \\ \hline 8 = 4r \\ \hline \frac{8}{4} \quad \frac{4}{4} \\ \hline \boxed{2 = r} \end{array}$$



Problem #19-20 by creating a chart of x/y values. Show all work. Create/plot at least 4 points. Create the line using a ruler.

19.) $2x = y + 1$

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

$x = -1$

$$2(-1) = y + 1$$

$$-2 = y + 1$$

$$\begin{array}{r} -2 \\ -1 \\ \hline -3 = y \end{array}$$

$$-3 = y$$

$x = 0$

$$2(0) = y + 1$$

$$0 = y + 1$$

$$\begin{array}{r} 0 \\ -1 \\ \hline -1 = y \end{array}$$

$x = 1$

$$2(1) = y + 1$$

$$2 = y + 1$$

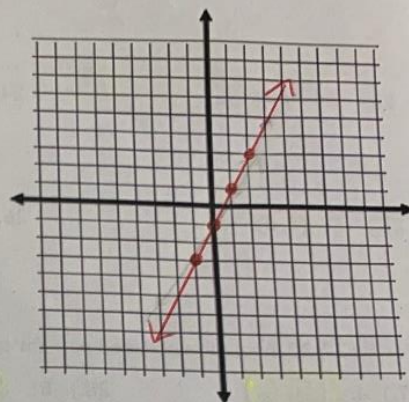
$$\begin{array}{r} 2 \\ -1 \\ \hline 1 = y \end{array}$$

$x = 2$

$$2(2) = y + 1$$

$$4 = y + 1$$

$$\begin{array}{r} 4 \\ -1 \\ \hline 3 = y \end{array}$$



★ for #s 19 and 20, you can choose ANY 4 x values! Just make sure the resulting points fit on the provided graph.

20.) $y = x - 4$

x	y
-1	-5
0	-4
1	-3
2	-2

$x = -1$

$$y = -1 - 4$$

$$y = -5$$

$x = 0$

$$y = 0 - 4$$

$$y = -4$$

$x = 1$

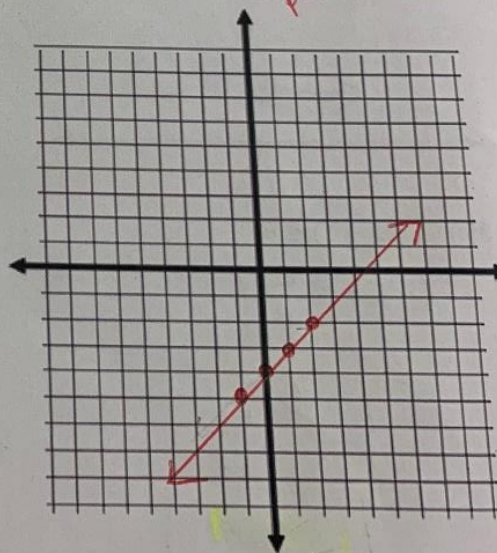
$$y = 1 - 4$$

$$y = -3$$

$x = 2$

$$y = 2 - 4$$

$$y = -2$$



For #21-26, plot and label the given points on the coordinate grid.

21.) A: $(-1, 4)$

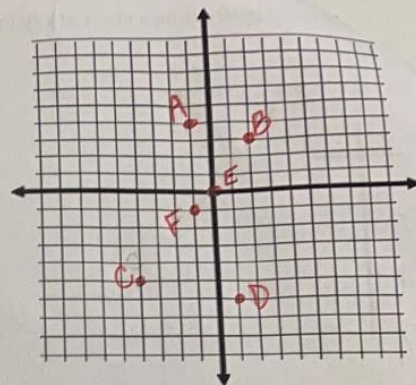
22.) B: $(2, 3)$

23.) C: $(-4, -5)$

24.) D: $(1, -6)$

25.) E: $(0, 0)$

26.) F: $(-1, -1)$



For #s 27-32, name the ordered pair for each plotted point on the graph.

27.) A: $(5, 6)$

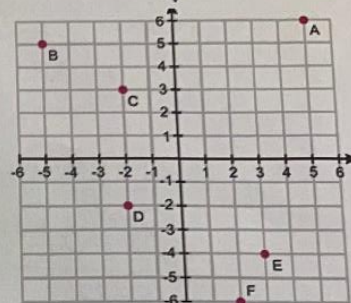
28.) B: $(-5, 5)$

29.) C: $(-2, 3)$

30.) D: $(-2, -2)$

31.) E: $(3, -4)$

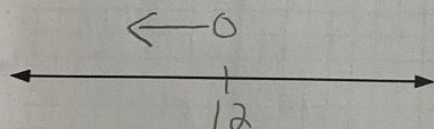
32.) F: $(2, -6)$



Solve the inequalities. Graph the solutions on a number line.

33.) $\frac{x}{4} \cdot (3) \cdot 4$

$x < 12$



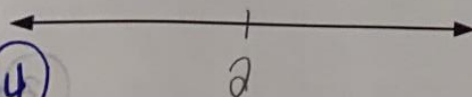
35.) $3(2x - 1) \leq 9$

$6x - 3 \leq 9$

$+3 +3$

$6x \leq 12$

$x \leq 2$

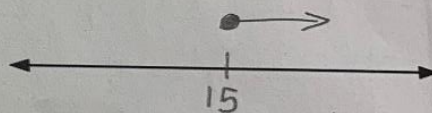


34.) $\frac{x}{5} + 7 \geq 10$

$-7 -7$

$5 \cdot \left(\frac{x}{5}\right) \geq (3) \cdot 5$

$x \geq 15$

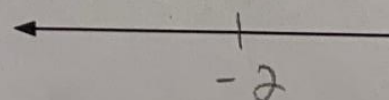
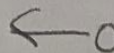


36.) $-4x - 3 > 5$

$+3 +3$

$-4x > 8$

$x < -2$



4

$$37.) 5 \leq 2x - 1 < 7$$

$$\begin{array}{ccc} +1 & +1 & +1 \\ \hline \end{array}$$

$$\frac{6 \leq 2x < 8}{2 \quad 2 \quad 2}$$

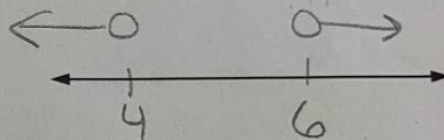
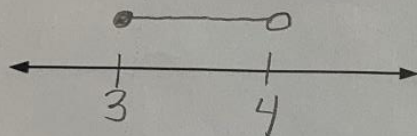
$$3 \leq x < 4$$

$$38.) 3x < 12 \quad \text{or} \quad x + 2 > 8$$

$$\frac{3x < 12}{3 \quad 3}$$

$$\frac{x + 2 > 8}{-2 \quad -2}$$

$$x < 4 \quad \text{or} \quad x > 6$$



39.) Name 3 numbers x could be if $x \leq 2$

2, 1, 0, -1, ...

** 2 or smaller!*

40.) Label all 4 quadrants, the origin, and the x and y axis.

