Algebra 1

	Day	Date	Video	Assignment Due	Is it done?
19	Tuesday	4/14/2020	8.9	348: 1-30 (notes in packet 2)	
20	Wednesday	4/15/2020		352: 1-20	
21	Thursday	4/16/2020		practice quiz 8.6-9 (in packet 2 already)	
22	Friday	4/17/2020		quiz (in packet 2 already)	
23	Monday	4/20/2020		practice test chapter 8 (in packet 2 already)	
24	Tuesday	4/21/2020		test	
25	Wednesday	4/22/2020	9.1		
26	Thursday	4/23/2020	9.2	372: 1-28 [NEED GRAPH PAPER]	
27	Friday	4/24/2020	9.4	378: 1-20 (ignore directions) [GRAPH ALL]	
28	Monday	4/27/2020		387: 1-30 [GRAPH 19-22]	
29	Tuesday	4/28/2020		practice quiz	
30	Wednesday	4/29/2020			
31	Thursday	4/30/2020	9.5		
32	Friday	5/1/2020	9.6	394: 1-28 [GRAPH 17-24]	
	Monday	5/4/2020		399: 3-22	
	How many total did you do:				

Zoom session happen Tues/Thurs at 2:00 for those needing any help

Name _____ **Test, Algebra 1, Chapter 8**

State the restriction and simplify. (5)

1. $\frac{5x^3}{15x^2}$ _____ _____

2. $\frac{6x+12}{3}$ _____ _____

3. $\frac{x^2-4}{x^2+7x+10}$ _____ _____

4. $\frac{x^2-1}{x^2+6x+5}$ _____ _____

5. $\frac{x^2-25}{x^2-7x+10}$ _____ _____

Multiply. (5)

6. $\frac{6x^2}{y^3} \cdot \frac{y^2}{3x}$ _____

7. $\frac{12x^2z^2}{20y^3} \cdot \frac{5y^2}{3xz^3}$ _____

8. $\frac{3x+3}{y^3} \cdot \frac{y^2}{x+1}$ _____

9. $\frac{x^2-16}{x^2} \cdot \frac{3x^3}{4-x}$ _____

10. $\frac{x^2-25}{x+1} \cdot \frac{x^2-1}{x^2-6x+5}$ _____

Divide. (5)

11. $\dfrac{3x^2}{4y} \div \dfrac{9x}{8y^2}$ _____

12. $\dfrac{x-2}{x} \div \dfrac{x-2}{x+5}$ _____

13. $\dfrac{x^2-16}{x+4} \div \dfrac{x-4}{5}$ _____

14. $\dfrac{x^2-4}{x-1} \div \dfrac{x+2}{x^2-3x+2}$ _____

15. $\dfrac{x^2-4}{x-2} \div \dfrac{2x+4}{11}$ _____

Find the Least Common Denominator. (3)

16. $\frac{2}{5wx}, \frac{3}{15w^2z}$ _____

17. $\frac{7}{x+1}, \frac{8}{x+2}$ _____

18. $\frac{1}{x^2+6x+9}, \frac{2}{x^2-9}$ _____

Write equivalent expressions with the Least Common Denominator as the denominator. (2)

19. $\frac{5}{4x^3y}, \frac{6}{5xy^2}$ _____

20. $\frac{8}{x^2+3x-10}, \frac{9}{2-x}$ _____

Add or subtract. (5)

21. $\frac{5}{4x}+\frac{7}{4x}$ _____

22. $\frac{2x}{4-x}-\frac{8}{4-x}$ _____

23. $\frac{3}{x+1}+\frac{4}{x+2}$ _____

24. $\frac{2}{x-3}-\frac{3}{x^2-9}$ _____

25. $\frac{7}{12x^2}+\frac{3}{3x}+\frac{1}{4x}$ _____

Simplify each mixed expression. (3)

26. $3+\frac{5}{x}$ _____

27. $6x-\frac{x+2}{x}$ _____

28. $\frac{c-1}{4c+1}+c$ _____

Simplify each complex rational expression. (3)

29. $\dfrac{\frac{1}{x}+\frac{1}{y}}{\frac{5}{x}+\frac{5}{y}}$ _____

30. $\dfrac{\frac{5}{x}+\frac{5}{y}}{\frac{1}{3x}+\frac{1}{3y}}$ _____

31. $\dfrac{y-\dfrac{3}{y+4}}{1+\dfrac{1}{y+4}}$ _____

Divide the polynomials. (5)

32. $(3x^4 - 6x^2 - 12x) \div 3x^2$ _____

33. $(16x^3y^4 - 12x^2y^3 - 2xy) \div 4x^2y$ _____

34. $(x^2 - 6x + 8) \div (x - 4)$ _____

35. $(6x^2 - 7x + 7) \div (2x - 3)$ _____

36. $(3x^3 - 18) \div (x - 2)$ _____

Express as a ratio in simplest form. (3)

37. 30 to 12 _____

38. 6 feet to 10 yards _____

39. 1.2 cm to 36 mm _____

True or false? (2)

40. $\frac{12}{10} = \frac{18}{30}$ _____

41. $\frac{12}{20} = \frac{35}{60}$ _____

Solve. (4)

42. $\frac{7}{10} = \frac{28}{x}$ _____

43. $\frac{5c}{12} = \frac{45}{36}$ _____

44. $\frac{x+1}{5} = \frac{16}{20}$ _____

45. $\frac{8}{x} = \frac{16}{x+2}$ _____

Solve. (5)

46. $\frac{1}{x}+\frac{3}{x}=20$ _____

47. $\frac{1}{4}+\frac{5x}{6}=2$ _____

48. $\frac{2}{6x}+\frac{1}{4}=\frac{3}{8x}$ _____

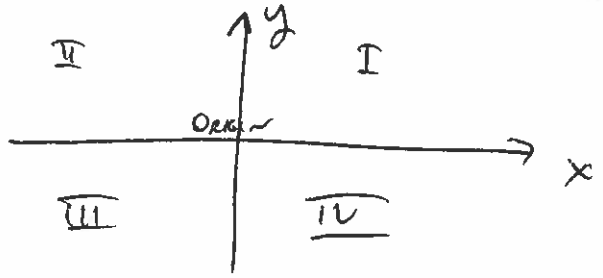
49. $\frac{x}{x+5}=6-\frac{5}{x+5}$ _____

50. $\frac{2x+4}{x-5}=\frac{3x}{x-5}$ _____

GRAPHING ORDERED PAIRS

(x, y)
x 1 y
COORDINATES

COORDINATE SYSTEM



GRAPH (2, 3) (-3, 4) (1, -2) (-3, -2)
(1, 0) (0, 4) (-2, 0) (0, -3)

GRAPH POINTS + IDENTIFY

IS (3, 2) A SOLUTION of $2x + 3y = 12$
(6, 0)
(4, 1)

y
y
n

372: 1-28
1-16 on 1 COORD SYS.
EACH of 21-28 on ITS own

Name _____

Algebra Quiz, Chapter 9 Vocabulary

1. What is this chapter about?

2. What are those?

3. What does an ordered pair look like?

4-8. Draw a coordinate system.

FILL IN FROM WATCHING VIDEOS A LITTLE BIT AT A TIME, DAY BY DAY

9. What does a graph do?

10. What is standard form?

11-14. What two choices do you have to graph? How do those work?

15. What does slope measure?

16-8. What are three formulas for slope?

Alg 1 9.2

372: 1-28

AN EQUATION WITH 2 VARIABLES THAT HAS AN INFINITE NUMBER OF SOLUTIONS - A GRAPH DESCRIBES THEM ALL

$x + y = 5$ (0,5) (1,4) (2,3) (3,2) (4,1) (5,0) (5,-0.5) (-1,6) ETC.

A LINEAR EQUATION IS AN EQUATION WHOSE GRAPH IS A LINE (1ST POWER x, y)

STANDARD FORM $Ax + By = C$ (INTEGERS ONLY)

TO GRAPH

INTERCEPTS IF A, B DIVIDE INTO C

POINTS WHERE GRAPH CROSS AXES

(0,) (, 0)

TABLE OTHERWISE

GET x= or y=

PICK #'S FOR OTHER VAR

$3x + 4y = 12$

$5x - 2y = 10$

$2x - 3y = 24$

$y = 2x$

$x = \frac{1}{3}y + 1$

$y = \frac{2}{3}x$

$y = \frac{2}{5}x + 4$

$2x + 3y = 8$

$x = 2$ $y = 3$ $x = -4$ $y = -5$

378: 1-20 (IGNORE DIRECTIONS)

Alg 1 94 134

378: 1-20

POS NEG 0 NO

/ \ — |

SLOPE MEASURES STEEPNESS $\frac{\text{RISE}}{\text{RUN}}$ $\frac{\Delta y}{\Delta x}$ $\frac{y_1 - y_2}{x_1 - x_2}$

SLOPE OF A LINE THRU (2,1) (4,2) $\frac{1}{2}$

(-3,1) (2,-2) $-\frac{3}{5}$

(0,2) (5,2) 0 HORIZONTAL

(-3,4) (-3,6) $\emptyset$ VERTICAL

GRAPH A LINE THRU (1,3) SLOPE $\frac{1}{2}$

(3,4) $-\frac{1}{3}$

ARE (4,-1) (-2,1) (2,5) COLLINEAR? yes

(-3,4) (0,7) (3,11) no

387: 1-30

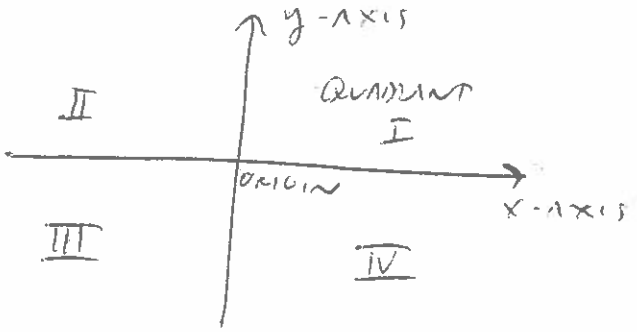
Name _____ Algebra Quiz, Chapter 9 Vocabulary

1. What is this chapter about? LINEAR EQUATIONS

2. What are those? EQUATION WHOSE GRAPH IS A LINE

3. What does an ordered pair look like? (x-COORDINATE, y-COORDINATE)

4-8. Draw a coordinate system.



9. What does a graph do? SHOWS ALL SOLUTIONS OF AN EQUATION

10. What is standard form? $Ax + By = C$ A, B, C INTEGERS

11-14. What two choices do you have to graph? How do those work?

MAKE A TABLE: GET x= OR y= AND PICK 3 #'S FOR EITHER ONE
INTERCEPTS: FIND 2 POINTS WITH A COORDINATE OF 0

15. What does slope measure? STEEPNESS

16-8. What are three formulas for slope?

$\frac{\text{RISE}}{\text{RUN}}$ $\frac{\Delta y}{\Delta x}$ $\frac{y_2 - y_1}{x_2 - x_1}$

Name _____ Algebra 1, 9.1-4 Review

1-9. Plot the points on graph paper. The first number is the x coordinate and tells you how far to move right or left. The second number is the y coordinate and tells you how far to move up or down. Label which point is which (with its letter) on the graph paper.

A(5,0) C(0,4) E(2,3) G(-4,-5) I(-3,0)
B(-2,4) D(4,-5) F(0,-2) H(0,0)

Identify the intercepts. The intercepts are points where one coordinate or the other is zero.

10. $3x + 5y = 30$ _____ _____

11. $-2x - 3y = 12$ _____ _____

Make a table or find the intercepts. Then graph on graph paper. Use intercepts if the equation is in standard form and the numbers with both x and y can go into the other number. If you can not use intercepts, make a table. The equation must be x= or y=. If it is not, you must make it be. Once you do, pick numbers for the other variable. Always pick 0 and two other numbers. If there is a fraction, pick numbers that the bottom of the fraction can go into.

12. $5x + 4y = 20$

13. $x - 3y = -10$

14. $y = 4x$

15. $4y = 3x$

16. $2y - 3x = -14$

17. $x = 2y + 5$

18. $y = 3x - 1$

19. $3x - 4y = 12$

Graph the line on graph paper. x= lines are vertical, and y= lines are horizontal.

20. $x = -2$

21. $y = 4$

22. $x = 3$

23. $y = -1$

Find the slope of a line through the points. Put the change in y over the change in x. Reduce if possible. Remember that two negatives make a positive when you divide. If you get 0 on the top, the answer is 0. If you get 0 on the bottom, there is no answer.

24. (1,4) and (5,8) _____

25. (2,3) and (6,-7) _____

26. (-3,2) and (-3, 6) _____

27. (-4,1) and (8,5) _____

28. (5,0) and (9,4) _____

29. (6,9) and (0,-3) _____

30. (-7,8) and (-1, 8) _____

31. (-8,7) and (2,1) _____

32. (9,6) and (3,6) _____

33. (0,5) and (4,-9) _____

34. (-1,4) and (-5, 8) _____

35. (-2,3) and (-2,7) _____

On graph paper, through the given point, draw a line with the given slope. First plot the point. Then use the slope to find another point. The top of the slope tells you how much to move up, and the bottom tells you how much to move over.

36. (2,3) with slope 3/4

37. (-4,-5) with slope -1/5

Name _____ **Algebra 1, 9.1-4 Quiz**

1-9. Plot the points on graph paper (use the letters to label which is which)

A(-2,0) B(2,-4) C(0,-5) D(-1,5) E(-2,-3) F(0,4) G(4,5) H(0,0) I(3,0)

Identify the intercepts

10. $4x + 5y = 20$ _____ _____

11. $-2x + 3y = 18$ _____ _____

Graph on graph paper.

12. $5x + 4y = 12$

13. $x + 3y = 5$

14. $y = -2x$

15. $-5y = 3x$

16. $7y = 2x - 14$

17. $x = 2y - 5$

18. $y = -3x + 5$

19. $5x + 4y = 20$

20. $x = 1$

21. $y = -2$

22. $x = -3$

23. $y = 4$

Find the slope of a line through the points.

24. (1,4) and (4,8) _____

25. (2,-7) and (5,-1) _____

26. (-3,12) and (-8, 6) _____

27. (-4,1) and (-8,-7) _____

28. (5,0) and (-9,-4) _____

29. (6,9) and (8,-2) _____

30. (-7,8) and (-1, 4) _____

31. (-3,7) and (2,2) _____

32. (9,6) and (3,6) _____

33. (4,5) and (4,-2) _____

On graph paper, through the given point, draw a line with the given slope.

34. (-2,-3) with slope 4/5

35. (4,5) with slope -2/3

NAME _____ 9.1-4 QUIZ

1-9

12-13

14-16

17-19

34-35

20-23

Slope-intercept Form

$y = mx + b$

m → slope

b → y-intercept

GOOD FOR GRAPHING

① $4x + 3y = 12$

$3y = -4x + 12$

$y = -\frac{4}{3}x + 4$

slope $-4/3$

y-int 4

② $2x - 3y = 15$

Write eq of line with slope 2, intercept 5

$y = 2x + 5$

③ Graph $y = \frac{2}{3}x + 4$

(0,4) up 2, over 3

④ $3x + 4y = 20$ use $y =$

⑤ Graph $y = 5x - 2$

(0,-2) up 5, over 1

⑥ $2x + 6y = -12$ USE INTERCEPTS

Parallel lines have same slope

$y = 3x + 4$

$y = 3x + 5$

$2x + 3y = 9$

$4x + 12 - 6y = 0$

Hw: 1-28

394: 1-28

POINT-SLOPE FORM

$y - y_0 = m(x - x_0)$

SLOPE-INT $\frac{2}{3}$ $(5,2)$ $y-2 = \frac{2}{3}(x-5)$ $y = \frac{2}{3}x - \frac{4}{3}$

STANDARD $-\frac{3}{4}$ $(-2,4)$ $y-4 = -\frac{3}{4}(x+2)$ $4y + 3x = 10$

$4y - 16 = -3(x+2)$

SLOPE-INT $(-3,4)$ $(5,1)$ $m = \frac{-3}{8}$ $y-1 = -\frac{3}{8}(x-5)$ $y = -\frac{3}{8}x + \frac{23}{8}$

STANDARD $(2,3)$ $(-2,5)$ $m = \frac{2}{-4} = -\frac{1}{2}$ $y-3 = -\frac{1}{2}(x-2)$ $2y + x = 8$

$2y - 6 = -(x-2)$

$(2,3)$ $\parallel$ to $2x+3y=7$ $3y = 7-2x$ $m = -2/3$

SLOPE-INT $y-3 = -\frac{2}{3}(x-2)$ $y = -\frac{2}{3}x + \frac{13}{3}$

399: 3-22

Alg 1

9.7

140

398: 3-22

LINEAR INEQUALITIES

REMEMBER
- $>$ ○⟶
- $<$ ⟵○
- $\geq$ ●⟶
- $\leq$ ⟵●

NOW
- $>$
- $<$
- $\geq$
- $\leq$

$y > x + 3$

is $(2,4)$ a point of inequality

$(3,8)$

GRAPH

① $y < \frac{2}{3}x + 4$

⑦ $y > 7$

⑧ $x \geq 2$

② $y \geq -\frac{2}{5}x + 3$

③ $2x + 3y < 9$

④ $-2x + 4y \geq 8$

⑤ $y + 3 \leq 2x - 5$

⑥ $2y + 1 > 5x + 7$

GRAPH → INEQUALITY