Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_



**Activity Sheet AL3–1J** **Review 10**

1. 2(x2 – 4) = (x2 + 56) x= \_\_\_\_\_\_\_\_\_ **2.** 2(2x2 + 2y – 2) – 3(–3x2 – 3y) + 3 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Round to 1/100) (Combine Like Terms)



3. 3x2 + 5x – 2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **4.** 148 x5 49½ x6 y−3  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x + 2 85x−6 70y3 ( in simplified exponent notation)

5. 4.33 X 10101 **̶** 3.22 X 10102 =\_\_\_\_\_\_\_\_\_\_\_\_\_ **6.** 3√192 + 2√507 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

( in scientific notation) ( in simplified radical notation)

7. Given: 4x2  – 100 :Find x \_\_\_\_\_\_\_\_\_\_When f(x) = 0 **8.** Factor: x2 – 16 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Is – 1 ± √41 the solutions to y = 4x2 + 2x – 10 ? **Yes / No**

4

What altitude (in feet) would you be in a hot air balloon after two hours if you started with at an altitude of 108,000 feetand if it lowered at a rate of 3.82% per minute?

10. Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **11.** Amount: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Round to nearest foot)



12. Graph the solution to the following system of inequalities on the number line below:

– 3x – 4 ≥ 7 and – 2x + 8 < 12 ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜

13. 6x + 2 = 40 x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **14.** Graph: 15x – 25 > – 20 + 5x

7 8x + 3 (round to 1/100) (for #14) 5

15. Find root(s): 3x2  – 2x – 16 = 0 Roots(s)=\_\_\_\_\_\_\_\_\_\_\_\_\_

16. f(x)= 0 & zero(s) of the line through the points 4=f(8) and (–4, –4). (x)= \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

(round to 1/100) zero(s) (bonus)

Based on table (a.), write the equation and find shipping cost of 888 pounds .

(a.) **17.** Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Given: 19.** Function:?

Lbs. (x) Shipping Costs(y)

2.00 3.16

5.00 16.9

9.00 35.22

13.0 53.54

16.0 67.28

(Slope-Intercept form) 1 –50 **Yes / No**

2 – 2 **20.**Equation:

3 –250

**18.** Cost: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 0 –0.4

(Round to nearest cent) –1 –10 \_\_\_\_\_\_\_\_\_\_\_\_

**21.** Graph: y + 2 = 3(x+1) **22.** Solve the system of equations; **23.** Find the equation of :

2x – 2y = 6 **y = – 3(x + 4) – 4** – 0.4, 3.2, 6.8, 10.4, 14, …

**x + 7 = – y + 3**

Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer:\_\_\_\_\_\_\_\_\_\_\_\_\_ (Slope-intercept form)



24. Determine Function, and Domain & Range: Equation through point (7, 2)

Function? **Yes / No** ⏐⏐ to **2x + y = 8** and ⊥ to **x-axis.**

Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **25.** ⏐⏐ Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Inequality Notation) (bonus) (slope intercept form)

Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **26.** ⊥ Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Inequality Notation) (bonus) (standard form)

‘a’

Write the equations of line ‘a’ and ‘b’

‘b’ **27.** Line ‘a’ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **29.** Write in vertex form: y= 2x2 – 24x + 6

(TRUE Point-Slope form)

**28.** Line ‘b’ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(slope- intercept form) (y= A(x-h)2 + k)

**30.** Winning the majority (≥270) Electoral College votes. : Being elected President of the United States.

**ASSOCIATON or CAUSATION**

Given: **f(x) = (x) 2 → (0. x) 2** **31.** Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**32.** Effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(type of transformation) (left/right/up/etc… & amount)

How much air would be in a balloon after 33 hours if you started with the volume of the balloon of 333 m3  and if it was inflated at a rate of 3.33% per hour?

33. Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **34.** Amount: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Round to 1/100 )

**Given:** Transformation: **f(x) →** –**f(x)** of function f(x) = (x)2:

35. Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **36.** Effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(type of transformation) (left/right/up/down, #of spaces, across x/y axis, etc.)

37. Algebraic Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Ordered Pair form )

Given: **Point A ( – 4, 6) underwent the translation: Right 8 ; Down 13 spaces.**

38. Location of **A’** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**39.** Algebraic Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Ordered Pair) (Ordered Pair Form)

40. Functional Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(f(x) **→** )

41. Rewrite the following equation into the form listed:

Given parabola: (3, 9); through point: (2 , – 16) y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Vertex) In ( Ax2 + Bx + C ) format

Graph: **42.** Equation that created Graph: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10

**43.** Equation (value) of Axis of Symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-10 10 **44.** Vertex of equation that created Graph: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

. (ordered pair)

. **45.** Range of equation that created Graph: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-10 (Inequality Notation)