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



**Activity Sheet AL3–1I** **Review 9**

1. 2(x2+3) = 3(x2 – 10) x= \_\_\_\_\_\_\_\_\_ **2.** 7(2x2 + 4y – 3) – 4(–3x2 – y) + 9 =\_\_\_\_\_\_\_\_\_\_\_\_\_

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



3. x2+8x+16 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **4.** 69 x4 8⅔ y−8  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x + 4 124x−5 240y8 ( in simplified exponent notation)

5. 5.2 X 10185 **•** 3.2 X 10150 =\_\_\_\_\_\_\_\_\_\_\_\_\_ **6.** 7√108 + 2√288 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

( in scientific notation) ( in simplified radical notation)

7. Given: 4x2  – 88 :Find x \_\_\_\_\_\_\_\_\_\_ When f(x) = 56 **8.**Factor: 4x2 – 4x –3 =\_\_\_\_\_\_\_\_\_\_\_

9. Is 7 ± √193 the solutions to y = –6x2 – 7x + 6 ? **Yes / No**

–12

What altitude (in feet) would you be in a hot air balloon after three hours if you started with at an altitude of 26,000 feetand if it lowered at a rate of 4.32% 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:

–4x – 5 ≤ 7 and 3x + 3 < 27 ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜

13. 8x + 3 = 7 x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **14.** Graph: 2x + 8 < –12 + x

9 3x + 2 (round to 1/100) (for #14) 6

15. Find zero(s): 2x2  + 2x – 12 = 0 zero(s)=\_\_\_\_\_\_\_\_\_\_\_\_\_

16. f(10)= ? & zero(s) of the line through the points 8=f(4) and (6, 8). f(10)= \_\_\_\_\_\_ \_\_\_\_\_\_\_\_

zero(s) (bonus)

Based on table (a.), write the equation and find shipping cost of 166.3 pounds .

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

Lbs. (x) Shipping Costs(y)

1.00 2.78

3.28 11.3984

4.89 17.4842

6.55 23.759

8.39 30.7142

(Slope-Intercept form) 1 486 **Yes / No**

–2 162 **20.** Equation:

4 18

**18.** Cost: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2 6

(Round to nearest cent) 5 .22 \_\_\_\_\_\_\_\_\_\_\_\_

**21.** Graph: 2x – 4y = 2 **22.** Solve the system of equations; **23.** Find the equation of :

3x + y = 6 **y – 3 = 4(x – 3)** –17, –13, – 9, – 5, – 1, …

**2x + 3y –15 = 0**

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

Answer:\_\_\_\_\_\_\_\_\_\_\_\_\_ (standard form)



24. Determine Function, and Domain & Range: Equation through point (–3, 7)

Function? **Yes / No** ⏐⏐ and ⊥ to y-axis.

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

(Inequality Notation) (bonus) (standard form)

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

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

‘a’

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

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

(standard form)

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

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

**30.** The longer rodeo stays in town : The number of happy people. **ASSOCIATON or CAUSATION**

Given: f(x) = (x) 2 → (x+3) 2  **31.** Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**32.** Effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

How much air would be in a balloon after12 hours if you started with the volume of the balloon of 500 m3  and if it was inflated at a rate of 3.54% per hour?

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

(Round to 1/100 )

**Given:** Transformation: **f(x) → f(**–**x)** of function f(x) = (x+1)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: **f(x) = (x) → g(x) =** 4**(x)**:

38. Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **39.** Effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

40. Algebraic Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Ordered Pair form )

41. Rewrite the following equation into the form listed:

Given parabola: (2,6); through point: (4 , – 10) 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)

(2, –22)