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

**Activity Sheet AL3–1L** **Review 12**

1. 2(3x – 4) = 4(x + 6) x= \_\_\_\_\_\_\_\_\_ **2.** (x+1)(x – 1 – 3.0 ) =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (Round to 1/100) x+1 (Solve and Combine Like Terms)

3. 5x2 + 43x – 18 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **4.** 88 x5 144½ x−6 y−3  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 x + 9 85x−6 70y3 ( in simplified exponent notation)

5. 9.48 X 10111 **●** 6.2 X 10112 =\_\_\_\_\_\_\_\_\_\_\_\_\_ **6.** 6√405 + 7√320 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 ( in scientific notation) ( in simplified radical notation)

7. Given: 5x2  – 9 :Find x \_\_\_\_\_\_\_\_\_\_When f(x) =71 **8.** Factor: 81x2 – 1 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Is 9 ± √21 the solutions to 5x2 – 9x = – 3 ? **Yes / No**

 10

 How many ants would be in a 12,000 member ant colony after 5 years if the ant colony increased at a rate of 72.5% per year?

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

 (Round to nearest ant)

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

5x – 4 < 16 and 3x + 5 ≥ – 4 ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜ ⎜

13. 3x + 9 = 23 x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **14.** Graph: 6x – 30 ≥ – 10 + x

 11 13x – 3 (round to 1/100) (for #14) 5

15. Find root(s): 4x2  – 6x – 2 = 0 Roots(s)=\_\_\_\_\_\_\_\_\_\_\_\_\_

 (Round to 1/100)

16. f(x)= 0 & zero(s) of the line through the points 4=f(8) and f(6)=2 (x)= \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

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

Based on table (a.), write the equation and find shipping cost of **962** pounds .

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

Lbs. (x) Shipping Costs(y)

 1.0 $ 1.40

 4.0 $ 26.60

10.0 $ 77.00

13.5 $ 106.40

16.0 $ 127.40

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

 2 –11 **20.**Equation:

 3 –3

 **18.** Cost: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4 –27

 (Round to nearest cent) 5 3 \_\_\_\_\_\_\_\_\_\_\_\_\_

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

 2x + 2y > 6 **y+6 = –2(2x + 4)** **9, 3, – 3, – 9, – 15, …**

  **x + 8 = – y + 6**

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

 (Point of intersection) (bonus) Answer:\_\_\_\_\_\_\_\_\_\_\_\_\_ (Slope-intercept form)



24. Determine Function, and Domain & Range: Equation through point (2, 8)

 Function? **Yes / No** ⏐⏐ to **y-axis** and ⊥ to to **x + 3y = 8**

 ○ 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= 4x2 + 32x – 68

 (TRUE Point-Slope form)

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

 ‘b’ (Standard form) (y= A(x-h)2 + k)

**30.** Performing Double Method with Logic Testing on all problems on the Algebra 1 EOC test.: Earning a perfect (54/54) score on Algebra 1 EOC test.

 **ASSOCIATON or CAUSATION**

Given: **f(x) = (x) 2 → (6x) 2** **31.** Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**32.** Effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

A person has a household mortgage of $235,000. The person has added $30,000 in upgrades to the house. The same person is paying off the mortgage and upgrades at a rate of 3 % per month? How much with the person owe on the mortgage and upgrades after 3 years?

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

 (Round to 1/100 )

**Given:** Transformation: **f(x) → f(x** – **9)** 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 ( – 2, 8) underwent a reflection across the x-axis :**

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: (5, 2); through point: (4 , 9 ) y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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

2

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

 -2 2 **44.** Vertex of equation that created Graph: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 . (ordered pair)

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

 -2 (Inequality Notation)