

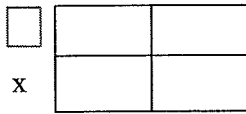
Student: _____
Date: _____
Time: _____

Instructor: klecenda fort
Course: Group 2
Book: *Connected Mathematics 3
(Grades 6-8)

Assignment: Homework 17-AAA

1. Draw a rectangle illustrating the following expression.

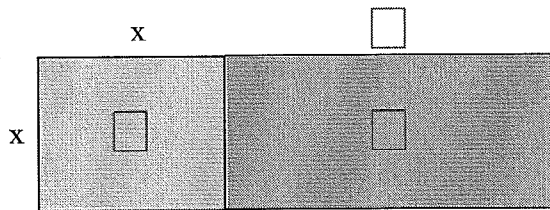
$$(x + 1)^2$$



Note: Figure is not to scale.

2. Complete the rectangle to illustrate this product.

$$x(x + 8)$$



3. Factor the expression.

$$x^2 + 16x + 63$$

$$x^2 + 16x + 63 = \square$$

4. Factor the trinomial completely.

$$x^2 + x - 72$$

$$x^2 + x - 72 = \square$$

5. Factor the expression.

$$x^2 - 49$$

$$x^2 - 49 = \square$$

(Type your answer in factored form.)

6. Simplify the product.

$$(x + 3)(x + 2)$$

$$(x + 3)(x + 2) = \square$$

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7. Simplify the product using the distributive property.

$$(5k + 4)(7k - 2)$$

$$(5k + 4)(7k - 2) = \square \text{ (Simplify your answer.)}$$

8. Find the product of the two binomials.

$$(x + 8)(x + 4)$$

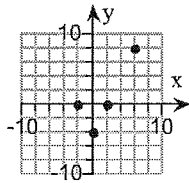
$$(x + 8)(x + 4) = \square \text{ (Simplify your answer.)}$$

9. Graph the set of points. Which model is most appropriate for the set?

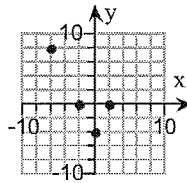
$$(-2, -8), (0, -4), (2, 0), (6, 8)$$

Graph the points. Choose the correct graph below.

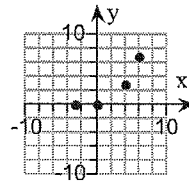
A



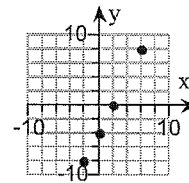
B



C



D



Which model is most appropriate for the set?

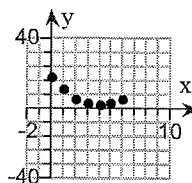
- Quadratic model
 Linear model
 Exponential model
 None

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10. Tell whether a linear or quadratic function would be a more appropriate model for this set of graphed data. If linear, tell whether the slope should be positive or negative. If quadratic, tell whether the coefficient of x^2 should be positive or negative.



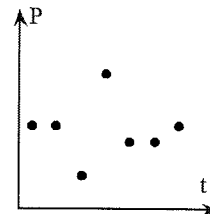
Would an appropriate model for the graphed data be linear or quadratic?

- Linear
 Quadratic

Should the coefficient of x^2 be positive or negative?

- Positive
 Negative

11. A scattergram of a given situation is graphed to the right. Determine whether a linear model, a quadratic model, or neither type of model would be reasonable for modeling the data.



Choose the correct answer below.

- Quadratic model
 Linear model
 Neither type of model

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12. Y_1 is defined as a quadratic function. Determine the coordinates of the vertex of the graph, maximum or minimum point and value, and the range of the function.

The coordinates of the vertex are

(Type an ordered pair.)

Is the vertex a maximum or minimum point?

^A minimum point

^D maximum point

The minimum value of the function is

Choose the range of the function.

^A $(-25, \infty)$

^D $(0, -25)$

^V $[7, -25)$

^V $[-25, \infty)$

X	Y_1	
4	-16	
5	-21	
6	-24	
7	-25	
8	-24	
9	-21	
10	-16	
$X = 4$		