

## Algebra P4

## Homework #52

1. Find the line of regression equation. Then use it to predict the value of  $y$  when  $x = 13$

|   |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| x | 3    | 7    | 11   | 12   | 15   | 17   | 19   |
| y | 1.45 | 3.82 | 5.21 | 5.60 | 6.76 | 7.56 | 8.26 |

2. Find the exponential regression equation. Then use it to predict the value of  $y$  when  $x = -3.2$ .

|   |      |      |      |      |      |       |
|---|------|------|------|------|------|-------|
| x | -6   | -5   | -4   | -3   | -2   | -1    |
| y | 0.46 | 0.81 | 1.55 | 3.11 | 6.54 | 13.99 |

3. Find the quadratic regression equation. Then use it to predict the value of  $y$  when  $x = 2.5$

|   |    |    |   |   |   |    |
|---|----|----|---|---|---|----|
| x | -2 | -1 | 0 | 1 | 2 | 3  |
| y | 7  | 4  | 2 | 3 | 8 | 17 |

4. Decide which regression equation seems best. Then use it to predict the  $x$ -intercept.

|   |      |     |      |      |       |
|---|------|-----|------|------|-------|
| x | 4    | 5   | 6    | 7    | 8     |
| y | 12.1 | 5.4 | -1.0 | -7.9 | -14.9 |

5. Decide which regression equation seems best. Then use it to predict the value of  $y$  when  $x = 12$ .

|   |    |      |    |    |    |    |
|---|----|------|----|----|----|----|
| x | 5  | 7    | 9  | 11 | 13 | 15 |
| y | 55 | 38.5 | 27 | 19 | 13 | 9  |