

Solutions

① a) $a = -1789.31$ $b = 0.92$

$$y = 0.92x - 1789.31$$

b) $r \approx 0.996$

② a) $y = 0.92(1992) - 1789.31 = 43.33$

b) $y = 0.92(2001) - 1789.31 = 51.61$

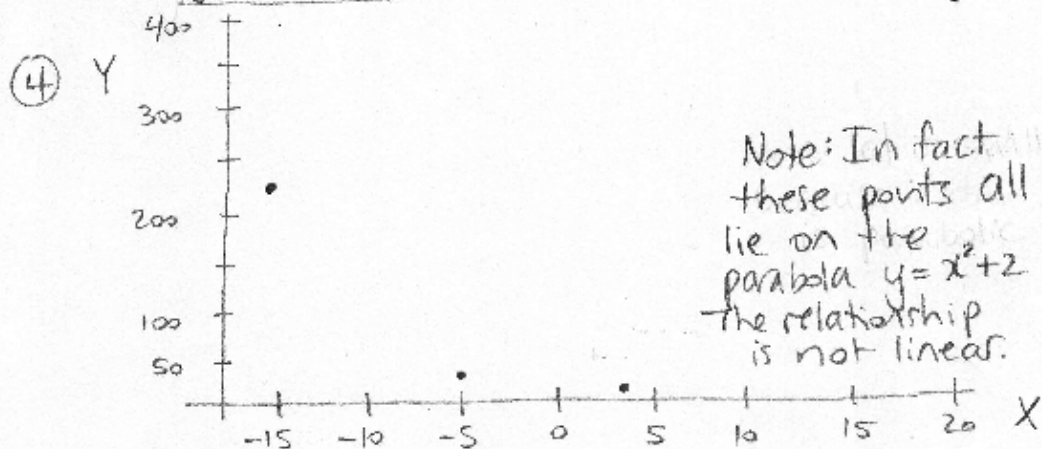
We should not predict outside the range of provided x -values.

Note: In 2001 the actual y -value was only $y = 46.9$, partially due to the events of 9/11.

③ $r \approx 0.49$

$a \approx 162.14$ $b \approx 6.14$

$$y \approx 6.14x + 162.14$$



⑤ a) $y \approx 0.66x + 109.81$

b) $152 = 0.66x + 109.81$

$$42.19 = 0.66x$$

$$x \approx 63.92 \text{ years}$$

⑥ For Data Set A: $r \approx 0.885$

" B: $r \approx -0.992$

$|r|$ is larger for Data Set B.
Data Set B fits better to a line.

⑦ $x = -3$

⑧ r is undefined for a set of points on a vertical line.

⑨ $y = 9$

⑩ r is undefined for a set of points on a horizontal line.