

S-ID.B AND S-ID.C

S-ID.B: Skills Practice Problems

3.1 #1-6

Find the linear regression equation and the correlation coefficient (r), and predict using the equation.

1. The table shows the attendance for the varsity football games at Pedro's high school. Predict the attendance for Game 9.
2. The table shows the attendance for the annual spring concert at Eva's high school for 6 years. Predict the attendance in 2016.

| Game | Attendance |
|------|------------|
| 1 | 2000 |
| 2 | 2132 |
| 3 | 2198 |
| 4 | 2301 |
| 5 | 2285 |
| 6 | 2401 |

$$f(x) = 73x + 1963, r \approx 0.9694$$

Game 1 is represented by $x = 1$, so Game 9 is represented by $x = 9$.

$$f(x) = 73x + 1963$$

$$f(9) = 73(9) + 1963$$

$$f(9) = 2620$$

The attendance during Game 9 will be 2620 people.

3. The table shows the average gas price for 6 months. Predict the average gas price for August.

| Month | Price of Gas (dollars) |
|----------|------------------------|
| January | \$3.15 |
| February | \$3.22 |
| March | \$3.19 |
| April | \$3.28 |
| May | \$3.35 |
| June | \$3.32 |

5. The table shows the number of miles Kata traveled for work each year for 6 years. Predict the number of miles Kata will travel in 2014.

| Year | Miles Traveled |
|------|----------------|
| 2006 | 8300 |
| 2007 | 7550 |
| 2008 | 8005 |
| 2009 | 7600 |
| 2010 | 6935 |
| 2011 | 6405 |

| Year | Attendance |
|------|------------|
| 2007 | 789 |
| 2008 | 805 |
| 2009 | 773 |
| 2010 | 852 |
| 2011 | 884 |
| 2012 | 902 |

4. The table shows monthly record sales of a recording artist over 6 months. Predict the record sales total for December.

| Monthly | Record Sales (CDs) |
|----------|--------------------|
| January | 60,000 |
| February | 54,000 |
| March | 58,000 |
| April | 46,000 |
| May | 43,000 |
| June | 30,000 |

6. The table shows the number of songs downloaded for a recording artist over 6 months. Predict the number of songs that will be downloaded in November.

| Month | Songs Downloaded |
|----------|------------------|
| January | 15,302 |
| February | 16,783 |
| March | 18,204 |
| April | 17,899 |
| May | 20,345 |
| June | 24,980 |

S-ID.C: Skills Practice Problems

3.1 #1-6

Find the equation, then *interpret* the slope, y-intercept, and correlation coefficient.

1. The table shows the attendance for the varsity football games at Pedro's high school. Predict the attendance for Game 9.

| Game | Attendance |
|------|------------|
| 1 | 2000 |
| 2 | 2132 |
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2. The table shows the attendance for the annual spring concert at Eva's high school for 6 years. Predict the attendance in 2016.

| Year | Attendance |
|------|------------|
| 2007 | 789 |
| 2008 | 805 |
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| 2010 | 852 |
| 2011 | 884 |
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