LESSON 163

1. 4.8 miles per hour

2. Mean = Median = 5.5

3. 75%

4. About $y = \frac{1}{2}x + 1$

5. From 64% to 70%

6. $35/36$

7. $2/3$

8. $1/6$

9. $7/10$

10. $7/23$

Worked-out solutions:

1. $\frac{4 \text{ miles}}{50 \text{ minutes}} \cdot \frac{60 \text{ minutes}}{1 \text{ hour}} = 4.8$ miles per hour

2. Mean $= (3 + 9 + 1 + 5 + 6 + 3 + 8 + 9)/8 = 5.5$

Order the values: $1, 3, 3, 5, 6, 8, 9, 9$

Median = middle value $= (5 + 6)/2 = 5.5$

3. Quartiles divide a data set into four parts, with approximately 25% of the data values in each part.

80 is the first quartile, which separates the lower 25% from the upper 75% of the data set.

4. *If your answer is close, you are correct.*

The slope is approximately $1/2$.

The y-intercept is approximately 1.

The line of best fit is approximately $y = (1/2)x + 1$

5. Range = estimate $\pm$ margin of error

The minimum is $67 - 3 = 64\%$.

The maximum is $67 + 3 = 70\%$.

6. 36 possible outcomes: $11, 12, 13, \ldots, 66$

$P(\text{sum} = 12) = P(\text{rolling a 6 twice}) = 1/36$

$P(\text{sum} \neq 12) = 1 - P(\text{sum} = 12) = 35/36$

7. 15 possible outcomes: 2 red, 5 white, 8 yellow

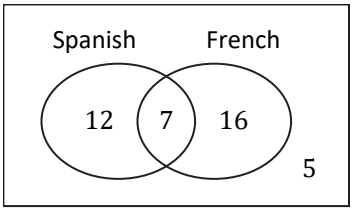
$P(\text{red or yellow}) = P(\text{red}) + P(\text{yellow})$

$= 2/15 + 8/15 = 2/3$

8. $P(\text{both even}) = P(\text{even}) \times P(\text{even}|\text{even})$

$= 4/9 \times 3/8 = 1/6$

9.



$P(\text{just one class})$
$= (12 + 16)/40$
$= 7/10$

10. $P(\text{Spanish}|\text{French}) = P(\text{both})/P(\text{French})$

$= (7/40)/(23/40) = 7/23$