AFM **3.3 Fitting a Line to Data** Chapter 3

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| **Slope** | **Slope-Intercept Form** | **Point-Slope Form** |
| $$m=\frac{y\_{2}-y\_{1}}{x\_{2}-x\_{1}}$$ | $$y=mx+b$$ | $$y-y\_{1}=m(x-x\_{1})$$ |

**Example 1:** Determine the slope and the y-intercept for each of the following:

1. y = 3/8x – 9
2. x = 3
3. y = 25
4. y = 16 – 5x

**Example 2:** Write the equation in slope-intercept form given m = -4/5 and b = 6

**Example 3:** Find the slope between the two points.

1. (3, -4) and (7, 2)
2. (5, 3) and (2, 5)

**Example 4:** Write the equation of the line containing:

1. (8, 1/3) and (10, 1)

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| **Remember…?** |
| **Parallel Lines**Lines with the same slopes that never intersect. |
| **Perpendicular Lines**Lines with the opposite reciprocal slopes that intersect at a 90-degree angle. |

1. (2, -5) and parallel to y = x + 4
2. (-3, -6) and perpendicular to 4x – y = 3