

Investigation 2.4 Intersecting Linear Models

- Standard form of a line— $y = mx + b$
- x is the **independent variable**
- y is the **dependent variable**
- m is the **slope/pattern in table/constant rate of change**
- $m = \text{rise/run}$
- b is the **y-intercept/starting point**

This table gives attendance and rain-forecast data for several Saturdays.

Saturday Resort Attendance

Probability of Rain (%)	0	20	40	60	80	100
Big Fun Attendance	1,000	850	700	550	400	250
Get Real Attendance	300	340	380	420	460	500

Part A

Use the table to find a linear equation relating to the probability of rain y to:

1. Saturday attendance at **Big Fun** _____
2. Saturday attendance at **Get Real** _____

Part B

Use your equations from above to answer these questions. **Show all of your calculations.**

1. What is the expected attendance at both attractions with a **50%** probability of rain?

Big Fun _____

Get Real _____

2. Suppose **460** people visited **Big Fun** one Saturday. Estimate the **probability of rain** on that day.

