- Ch 3 Test
- Announcements:
  1. Bring Mini-Project A or B (whichever you chose) to class on Thursday. The prof will collect them.
  2. This is yellow week for the metacognition assignment.
  3. Formulae Quiz 1 is on Tuesday, 10/30. Find the files on my website, and use them to study.

5.4.1 Linear Fractions and Their Properties (pp 51-72)

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**Forms of lines**:

- **Slope-intercept form**
  \[ y = mx + b \]
  \[ y = 3x - 7 \]

- **Point-slope form**
  \[ y - y_1 = m(x - x_1) \]
  \[ y + 7 = 2(x - 7) \]

- **Standard form**
  \[ Ax + By = C \]
  \[ 2x - \frac{1}{2}y = \frac{3}{2}n \]

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\[ \text{Problem 51} \]

\[ \text{#12 add 18} \]

1st table

- \[ m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-5)}{0 - (-2)} = 4 \]

2nd table

- \[ m = \frac{2(y_2 - y_1)}{x_2 - x_1} = \frac{2}{-1 - (-2)} = \frac{2}{1} = 2 \]

- \[ m = \frac{1 - 2}{4 - 1} = \frac{-1}{3} = -\frac{1}{3} \]

Different! So, non-linear

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Oct 2, 2018
- Ch 3 Test
- Announcements:
  ① Bring Mini-Project A or B (whichever you chose) to class on Thursday. The Prof will collect them.
  ② This is yellow week for the metacognition assignment.
  ③ Formulas Quiz 1 is on Tuesday, 10/9. Find the files on my website, and use them to study.

§ 4.1 Linear Fractions and Their Properties (pp-51-77)

**Obs:** Forms of lines:

- Slope-intercept form: \[ y = mx + b \]
- Point-slope form: \[ y - y_1 = m(x - x_1) \]
- Standard form: \[ Ax + By = C \]

\[ y = 3x - 2 \]
\[ y + 7 = 2(x - 1) \]
\[ 2x + \frac{1}{4}y = 3 \]

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\[ \text{P:51} \]

**# 12 and 18**

1st table ->

\[ m = \frac{y_2-y_1}{x_2-x_1} = \frac{1 - (-5)}{0 - (-2)} = \frac{1 + 5}{0 + 2} = \frac{6}{2} = 3 \] ③

\[ m = \frac{4 - 1}{1 - 0} = \frac{3}{1} = 3 \] ③ Same, so, linear

\[ m = \frac{13 - 4}{4 - 1} = \frac{9}{3} = 3 \] ③

2nd table ->

\[ m = \frac{2(-5)}{-1 - (-2)} = \frac{-10}{1} = -10 \] ③ Different! So, non-linear

\[ m = \frac{1 - 2}{1 - (-1)} = \frac{-1}{2} = -\frac{1}{2} \] ②
The slope tells us if our graph is increasing, decreasing, or constant.

E.g. 
- slope = 3 → increasing
- slope = 0 → constant
- slope = -3 → decreasing