

Comparing Slope Intercept and Standard Forms of Equations

When to Use Slope Intercept Form ($y = mx + b$)

- **Rate** – the rate is your slope
 - This number is always related to the x value
 - Per or each is often associated with slope
- **Flat Fee/Starting Amount** – this is your y-intercept
 - This value is constant

When to Use Standard Form ($Ax + By = C$)

- **Two Numbers** – represent x and y
 - Numbers per x and numbers per y
 - Typically addition is involved
- **Total** – what equation is set equal to
- No beginning amount
- Neither variable is dependent on the other

Directions: Define your variables (use x and y) and set up an equation for each scenario.

<p>1. A basketball team scored 60 points by making a combination of 2 point shots and 3 point shots. Write an equation to determine the combination of points scored by the team.</p>	<p>2. Marsha has \$125 now and plans to save \$35 per week. Write an equation to determine how much she has in savings each week.</p>
<p>3. Raul and his friends rent a sailboat for \$15 per hour plus a basic fee of \$50. Write an equation to determine the total cost of renting a sailboat.</p>	<p>4. Ed has \$35 to buy paints and brushes for a school project. Jars of paint cost \$4 each. The brushes are \$2 each. Write an equation to determine the combination of brushes and paint he can buy.</p>
<p>5. A teacher starts the year with \$600 for art supplies. He plans to spend \$40 per week on supplies. Write an equation to determine how much money he has remaining each week.</p>	<p>6. Your school is sponsoring a pancake dinner to raise money for a field trip. You estimate that 200 adults and 250 children will attend. You want to raise \$3800. Write an equation to find out what ticket prices to set to raise \$3800.</p>
<p>7. Gail orders CDs for \$8 each plus a total shipping cost of \$5. Write an equation to determine the total cost of purchasing CDs.</p>	<p>8. In a supermarket, each cup costs \$4 and each bowl costs \$6. You have \$34 to spend. Write an equation to determine the combinations of bowls and cups you can buy.</p>
<p>9. You are running a concession stand for the football game. You sell hot dogs for \$1 and sodas for \$.50. At the end of the night you made \$200. Write an equation to determine how many hot dogs and sodas were sold.</p>	<p>10. You are visiting Washington DC and a taxi company charges a flat fee of \$3.00 for using the taxi and an additional \$0.75 per mile. Write an equation that determines the cost of the taxi ride.</p>

Characteristics

- ▷ Domain:
- ▷ Range:
- ▷ Y-Intercept:
- ▷ X-Intercept:
- ▷ Zero:
- ▷ Maximum:
- ▷ Minimum:
- ▷ Interval of Increase:
- ▷ Interval of Decrease:
- ▷ Interval of Constant:
- ▷ Positive:
- ▷ Negative:
- ▷ End Behavior:

arithmetic sequences

- ▷ Recursive Formula
- ▷ Explicit Formula

Other Notes