Systems of Equations

Algebra 1: Unit 7

Review Answers

- Solve systems section:
  - (-1, 3)(1,2)
  - (-1, -1)(6.5, -1)
  - (-4, -1)(2, 3)
  - (1/3, 10)(4, 3)

Review Answers

- Word Problems section:
  - $23 per bush, $47 per tree
  - 1500 children, 700 adults attended
  - Sell 33.4 toothpicks and $100.33 to produce
  - Sell 552.88 pounds of tomatoes and $884.60 to produce

Standards:

- **Test Standards:**
- Standard 59: Graph a system of linear equations in a coordinate plane.
- Standard 60: Graph a system of linear inequalities in a coordinate plane.
- Standard 61: Determine the intersection point of a system of equations and denote its importance.
- Standard 62: Graph a system of linear equations in a coordinate plane in a real-world application.
- Standard 63: Use a graph of a system of linear inequalities to solve a real-world application.
- Standard 64: Solve a system of linear equations using substitution method.
- Standard 65: Solve a system of linear equations using the elimination method.
- Standard 66: Solve real-life application questions using the substitution and elimination methods.

Standard 59: Graph a system of linear equations in a coordinate plane.

- Graph the system of equations on a coordinate plane:
  - Y = -1/2x – 1
  - Y = 1/4x – 4

Standard 60: Graph a system of linear inequalities in a coordinate plane.

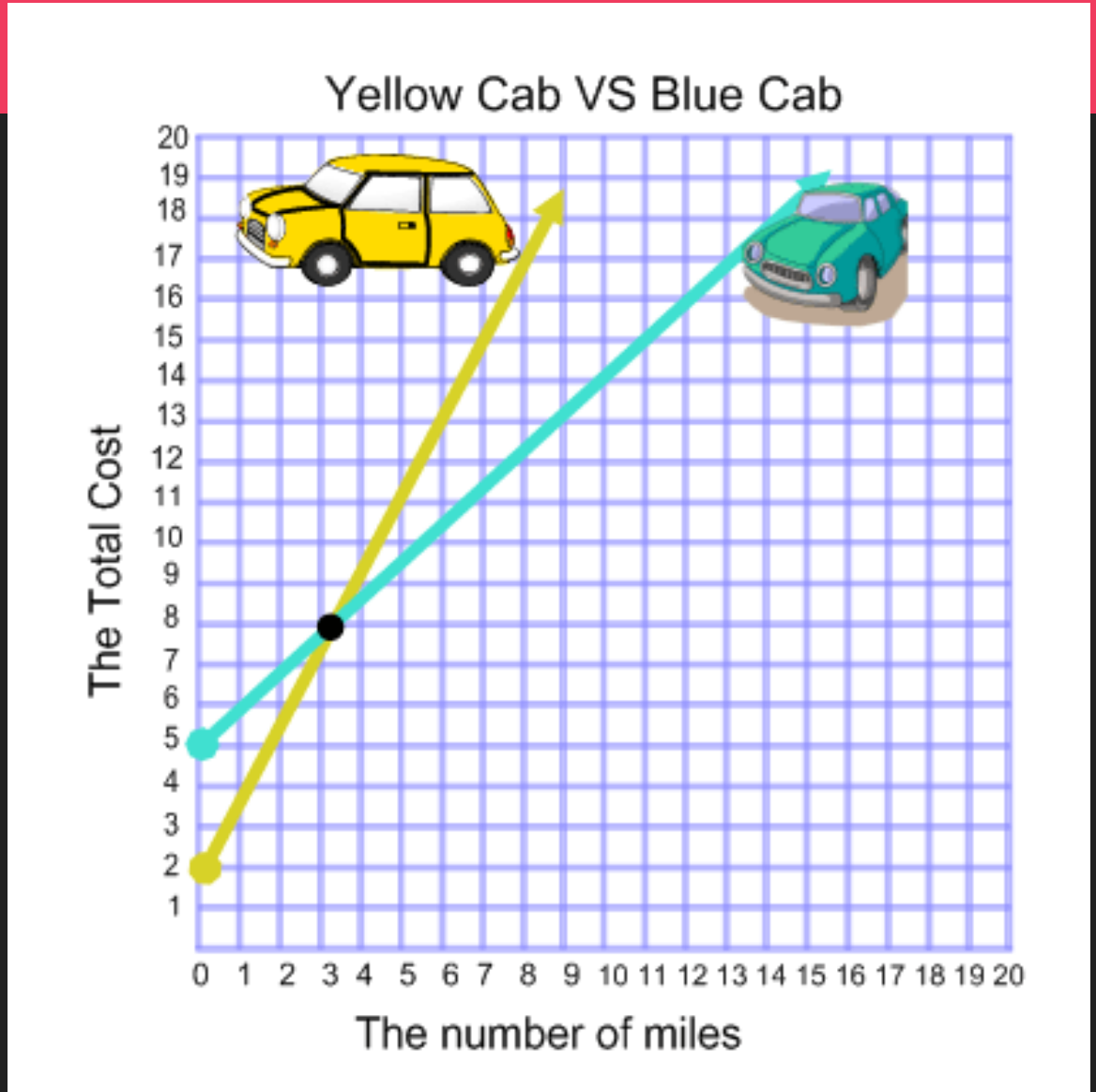
- Graph the system of inequalities in the coordinate plane.
  - $Y \geq 2/3x + 3$
  - $Y > -4/3x - 3$

Standard 61: Determine the intersection point of a system of equations and denote its importance.

- Determine the intersection point of the two given lines and denote its importance.
  - Y = -1/2x – 2
  - Y = -3/2x + 2

Standard 63: Use a graph of a system of linear inequalities to solve a real-world application.

- Given the graph to the right, what is the importance of the intersection point?



Standard 64: Solve a system of linear equations using substitution method.

- Solve the system using the substitution method.
  - $Y = x - 1$
  - $2x - 3y = -1$

Standard 65: Solve a system of linear equations using the elimination method.

- Solve the system of equations using elimination method.
  - -7x – 2y = -13
  - X – 2y = 11

Standard 66: Solve real-life application questions using the substitution and elimination methods.

- Solve the given application problem for the break-even point.
  - I am starting a business of selling poptarts. Each package costs $.75 to produce with a fixed cost of $400. How many poptarts should I sell to break even if I am selling them for $1.50 each?

Solve

- Solve with whichever method you see fit:
  - $Y = -5x - 17$
  - $Y = -x - 1$

Solve

- Solve with whichever method you see fit:
  - $-5x + y = -3$
  - $3x - 8y = 24$

Solve

- Solve with whichever method you see fit:
  - $Y = 6x - 11$
  - $-2x - 3y = -7$

Solve

- Solve with whichever method you see fit:
  - At a public carnival, children are charged $2.00 for admission and adults are charged $5.00 for admission. On a specific day, there were 417 people and the carnival received $1,449 in admission. How many children and how many adults attended the carnival?

Questions?