

Major Learning Targets for This Course

Functions

Students will define, evaluate and compare functions and will use functions to model relationships.

“I understand that a function is a rule that assigns exactly one output to each input.”

“I can compare functions represented in different ways.”

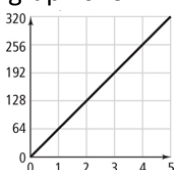
“I can use a function to model a linear relationship between two quantities.”

Example Task:

Which function below has the greatest rate of change? Which one has the greatest initial value? Explain how you know.

Function 1:

The function represented by the graph shown.



Function 2:

The function whose input and output are related by the equation $y = 40x + 70$.

Function 3:

The function which produced the table below.

x	y
0	50
10	150
20	250
30	350

Expressions and Equations

Students will understand the connection between proportional relationships, lines, and linear equations and they will solve linear equations and systems of linear equations.

“I can graph proportional relationships and interpret unit rate as the slope of the graph.”

“I can recognize whether a linear equation has one solution, infinitely many solutions, or no solutions.”

“I can solve systems of linear equations and approximate solutions by graphing.”

Example Task:

Suppose you know that the cost of 3 gift cards and 4 movie tickets is \$168, while 2 gift cards and 3 movie tickets cost \$116.

1. Explain how to use this information to find the cost of 1 gift card and 1 movie ticket.
2. Next, explain how you could find the cost of 1 movie ticket.
3. Explain how you would find the cost of 1 gift card.

Geometry

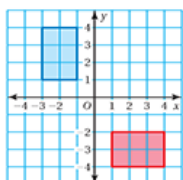
Students will use physical models, transparencies, or technology to understand congruence and similarity of figures.

“I can use tools to rotate, reflect, translate, and dilate figures in the coordinate plane.”

“I can determine whether two figures are congruent or not.”

“I can use coordinates to describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures.”

Example Task:



Are the two figures congruent?

How do you know?

If they are, describe a sequence of transformations that shows the congruence.

Expected Behaviors in Math Class

Students will...

- Consider available tools to help them solve problems and deepen understanding (including hands-on tools and technology).
- Look for patterns and connections.
- Explain their thinking and their process for solving a problem.
- Make predictions and estimations.
- Decide if an answer is reasonable.
- Justify conclusions.
- Communicate ideas clearly verbally and in writing, using math vocabulary when appropriate.
- Apply mathematics to solve problems in everyday life.

How Can I Support My Student in This Course?



Access Google Classroom Regularly (if Applicable)

- ⇒ Look at the Stream for daily announcements and a weekly schedule.
- ⇒ View the Classwork for assignment information and support.



Encourage Multiple Strategies and Representations of the Problem

- ⇒ Ask your student to solve the problem in different ways.
- ⇒ Encourage the use of different representations (e.g., symbols, words, or pictures/visuals), and have them make connections between representations.



Ask Questions & Encourage Your Student to Ask Questions

- ⇒ When your student is stuck, don't simply tell them the correct answer. Ask questions like:
 - "What is the question in the problem/task?"
 - "What do you understand/know from the task?"
 - "How do you know?" Listen while your student explains their mathematical reasoning and ask, "Does your answer make sense?" based on the context of the problem or task.
- ⇒ Encourage your student to write down questions to bring to their teacher or peer the next day.



Value Mistakes

- ⇒ Students are learning when they are making mistakes; create an environment where your student feels comfortable making a mistake and learning from it.



Acknowledge Effort over Answers and Speed

- ⇒ Celebrate how hard your student is working, whether their answer is correct or not.
- ⇒ When your student is stuck, remind them that learning can be challenging, and if they continue to practice and work hard, they will improve.

