Parent Guide for Grade 8 Math

Major Learning Targets for This Course

Functions

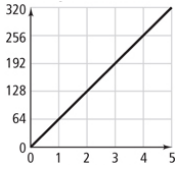
Students will define, evaluate and compare functions and will use functions to model relationships.

"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.

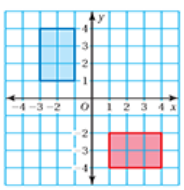
1. Explain how to use this information to find the cost of 1 gift card and 1 movie ticket.
2. Next, explain how you could find the cost of 1 movie ticket.
3. Explain how you would find the cost of 1 gift card.

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.

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Expected Behaviors in Math Class

Students will…

- ☐ Check into Google Classroom daily for announcements and to receive/turn in assignments.
- ☐ Attend live/recorded Zoom learning and support sessions, with the camera on when feasible.
- ☐ Consider available tools to help them solve problems (including hands-on tools and technology).
- ☐ Use technology and various applications to explore and deepen understanding.
- ☐ Explain their thinking and their process to solving a problem.
- ☐ Communicate ideas clearly verbally and in writing, using math vocabulary when appropriate.
- ☐ Decide if their answer is reasonable.
- ☐ Use examples and counterexamples to justify a conclusion.
- ☐ Apply mathematics to solve problems in everyday life.

How Can I Support My Student in This Course?

Access Google Classroom Daily

⇨Look at the Stream for daily announcements and a weekly schedule.
⇨View the Classwork for assignment information and support.
⇨Accept the Guardian Access request sent to your email address for regular updates on your student's progress.

Encourage Multiple Representations of the Problem

⇨Ask your student to solve the problem in different ways, and to make connections between the different representations.
⇨Ask your student to create visual representations help understand the concepts.

Ask Questions

⇨When your student is stuck, ask him/her questions like: "What is the question in the problem/task?" or "What do you understand/know from the task?" and "How do you know?" Listen while your student explains his/her mathematical reasoning and ask "Does your answer make sense?" based on the context of the problem or task.
⇨Guide your student to participate in small group discussions via Zoom to get questions answered or to send a private message to his/her teacher using Google Classroom.

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.

Don't Simply Tell Them the Right Answer

⇨Once students are aware that their answer is right, they are more likely to stop thinking about the math. Instead of telling students the right answer, ask them a question or have them draw a picture.

Praise Effort

⇨When your student gets a right answer, acknowledge how hard they must have worked and practiced.
⇨When your student is stuck, acknowledge that sometimes math is challenging and that if they continue to practice and work hard, they will improve.

For more information, visit scusd.edu/math or contact Mikila-Fetzer@scusd.edu, Math Coordinator

SCUSD's Equity & Access Guiding Principle: *All students are given an equal opportunity to graduate with the greatest number of postsecondary choices from the widest array of options.*

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