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Eighth Grade
Math

Week of April 27, 2020
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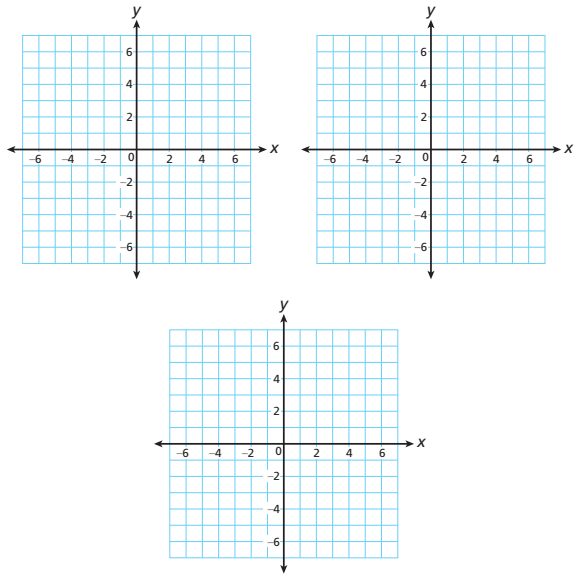
Construct Functions

Materials: coordinate planes (Lesson Support Master), ruler

Remind students that in order to construct a function, the slope m and the y-intercept b must be known. Discuss what information is needed in order to find the slope and the y-intercept.

Give the following sequence of instruction.

- Draw the lines $y = 2x$; $y = 2x - 3$; $y = -2x + 3$ on the coordinate grids.
- Identify what you know about the slope and the intercept of the function.
- Write down the slope-intercept form of an equation.
- **Ask:** If you have one ordered pair and the slope, what do you need to find? Identify that these can be substituted into the equation to find the y-intercept b.
- **Ask:** If you have two or more ordered pairs, what do you need to find? Identify that the slope can be calculated by finding the change in y divided by the change in x. Once m has been calculated, go back to the step above to find the y-intercept b
- Practice writing the equation of each graphed function in the form $y = mx + b$. ($y = 2x$; $y = 2x - 3$; $y = -2x + 3$)



Proficiency Level

Beginning

Under each graph, have students write "slope:" and, below that, "y-intercept:". As they find the slope and y-intercept for each graph, have them write them under the graph.

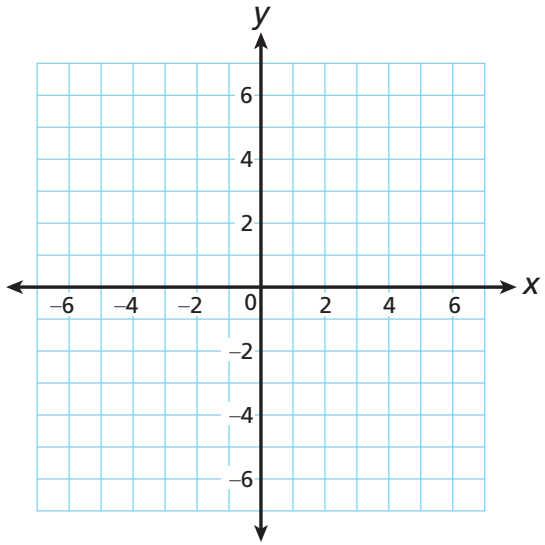
Intermediate

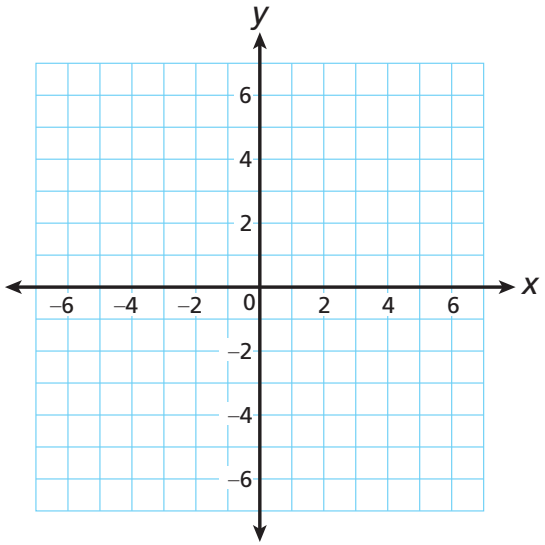
Have students work in small groups to find the slope and y-intercept for each graph. Have them take turns finding the slope or y-intercept for one graph. Have them use a full sentence to identify the slope or y-intercept they found.

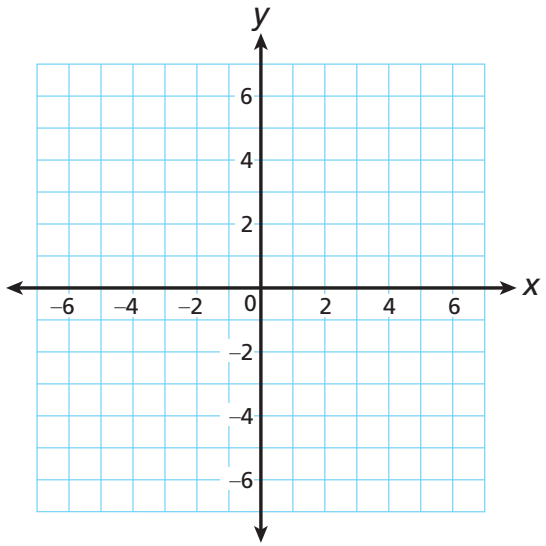
Advanced

Have students describe the process for finding the slope or y-intercept of a graph.

Construct Functions







Unit 2 Performance Tasks

1. **CAREERS IN MATH** **Cost Estimator** To make MP3 players, a cost estimator determined it costs a company $1500 per week for overhead and $45 for each MP3 player made.

a. Define a variable to represent the number of players made. Then write an equation to represent the company's total cost *c*.

b. One week, the company spends $5460 making MP3 players. How many players were made that week? Show your work.

c. If the company sells MP3 players for $120, how much profit would it make if it sold 80 players in one week? Explain how you found your answer.

2. A train from Portland, Oregon, to Los Angeles, California, travels at an average speed of 60 miles per hour and covers a distance of 963 miles. Susanna is taking the train from Portland to Los Angeles to see her aunt. She needs to arrive at her aunt's house by 8 p.m. It takes 30 minutes to get from the train station to her aunt's house.

a. By what time does the train need to leave Portland for Susanna to arrive by 8 p.m.? Explain how you got your answer. As part of your explanation, write a function that you used in your work.

b. Susanna does not want to leave Portland later than 10 p.m. or earlier than 6 a.m. Does the train in part **a** meet her requirements? If not, give a new departure time that would allow her to still get to her aunt's house on time, and find the arrival time of that train.

Unit 2 Performance Tasks

1. **CAREERS IN MATH** **Cost Estimator** To make MP3 players, a cost estimator determined it costs a company $1500 per week for overhead and $45 for each MP3 player made.

a. Define a variable to represent the number of players made. Then write an equation to represent the company's total cost c.

let p = number of players; $c = 1500 + 45p$

b. One week, the company spends $5460 making MP3 players. How many players were made that week? Show your work.

$5460 = 1500 + 45p$, $3960 = 45p$, $p = 88$; the company made 88 players.

c. If the company sells MP3 players for $120, how much profit would it make if it sold 80 players in one week? Explain how you found your answer.

$4500; I subtracted the cost of making 80 players from the total revenue.

2. A train from Portland, Oregon, to Los Angeles, California, travels at an average speed of 60 miles per hour and covers a distance of 963 miles. Susanna is taking the train from Portland to Los Angeles to see her aunt. She needs to arrive at her aunt's house by 8 p.m. It takes 30 minutes to get from the train station to her aunt's house.

a. By what time does the train need to leave Portland for Susanna to arrive by 8 p.m.? Explain how you got your answer. As part of your explanation, write a function that you used in your work.

3:27 a.m.; Use $d = rt$ with $d = 963$ mi and $r = 60$ mi/h to solve for t, the travel time from Portland to Los Angeles. $t = 963 \div 60 = 16.05$ h, or 16 h, 3 min. Add 30 min to get to her aunt's house: 16 h 33 min. Counting back from 8 p.m. gives a time of 3:27 a.m.

b. Susanna does not want to leave Portland later than 10 p.m. or earlier than 6 a.m. Does the train in part **a** meet her requirements? If not, give a new departure time that would allow her to still get to her aunt's house on time, and find the arrival time of that train.

No, the train leaves too early. Susanna needs to take a train that leaves by 10 p.m. A 10 p.m. train would arrive in Los Angeles at 2:03 p.m. the next day, and Susanna would be at her aunt's house at 2:33 p.m.

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Eighth Grade
Social Studies

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8th Grade Social Studies Document Analysis

Directions:

After analyzing the primary source picture of The Seneca Falls Convention, answer the following questions.

1.) What document are the two ladies riding on?

2.) In your opinion, why would the Abolitionist Movement be the "current" driving the women's suffrage movement?

3.) Why does the quote say it will be a "bumpy ride?"

Eighth Grade
ELA

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WORD CONNECTIONS

Cognates

The English word ***comedy*** comes from the Latin word *comoedia*, meaning "an amusing play or performance." It has the same meaning as the Spanish word *comedia*.

Classifying Comedy

Learning Targets

- Categorize humorous texts by levels of comedy.
- Analyze print and graphic features to explain how authors create humor.

Understanding Levels of Comedy

Comedy occurs in different ways.

Low comedy refers to the type of humor that is focused primarily on a situation or series of events. It includes such things as physical mishaps, humor concerning the human body and its functions, coincidences, and humorous situations. With low comedy, the humor is straightforward and generally easy to follow and understand.

Since the primary purpose of most low comedy is to entertain, the action is frequently seen as hilarious or hysterical and the effect is often side-splitting laughter and guffaws. Many times, the characters are exaggerated caricatures rather than fully developed characters. These caricatures are often caught in unlikely situations or they become victims of circumstances seemingly beyond their control. Thus, the plot takes priority over the characters. Examples of low comedy might include *Madea' s Family Reunion, Meet the Parents,* and *America' s Funniest Home Videos*. Shakespeare's comedies, such as *A Midsummer Night' s Dream* and *Twelfth Night*, are full of low comedy.

High comedy refers to the type of humor that is focused primarily on characters, dialogue, or ideas. It includes such things as clever wordplay, wit, and pointed remarks regarding larger issues. Many times, high comedy takes an irreverent or unconventional look at serious issues.

Sometimes the humor of high comedy is not immediately obvious; it can take a bit of reflection in order to realize the humorous intent. Frequently, the purpose of high comedy is to express an opinion, to persuade, or to promote deeper consideration of an idea. Often described as amusing, clever, or witty, high comedy typically results in chuckles, grins, and smiles rather than loud laughter. Clever use of language and interesting characters receive more attention than the circumstances that surround them. Examples of high comedy include *Modern Family, The Middle*, and, at times, *The Simpsons*. Shakespeare's tragedies, such as *Hamlet* and *Romeo and Juliet*, also include instances of high comedy.

Tuesday: Write a paragraph that explains the difference between low comedy and high comedy.

Wednesday: Practice writing complex sentences about humor.

Writing complex sentences is one way to improve your writing. Take a look at the sample sentence that follows, and notice the use of a comma after the subordinate or dependent clause that begins the sentence.

Because she was shivering, he gave her a blanket.

Write four complex sentences using the word *humor*. Start each of your complex sentences using these words: Regardless, Although, Whenever, If.

Thursday: Brainstorm what you already know about comic strips and political cartoons.

Analyze the comic and political cartoon below and identify whether they are low or high level comedy.

Friday: On a separate piece of paper, answer the questions below for both the cartoon and the comic strip.

1. **Describe the use of print and images in each.**
2. **What is the topic and what is happening in each piece?**
3. **Who are the characters?**
4. **How would you describe the humor?**

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Eighth Grade
Science

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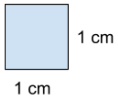
8th Grade Science: Week 4 April 27th
Natural Selection (Adaptations & Variations)

Directions:

1) Read all directions and write a hypothesis on the activity sheet.
2) Get 8 pieces of construction paper (or any type of paper you might have).
    a. Try to find black, blue, brown, green, orange, purple, red, and yellow. You can also use crayons, markers, or colored pencils to color white paper these colors, if needed.
    b. If you don't have all those colors, use what you have, and just adjust the data table on the activity sheet.
3) Cut 16 cm x 12 cm pieces of each color paper into thin strips about 1 cm wide.
4) Cut the thin strips into pieces approximately 1 cm square.



You will have about 200 squares of each color.

5) Clean up all the pieces of paper and put them into a plastic cup to carry them.
6) Find an area outside to throw the pieces of paper. Make sure you have permission, and it is safe to do so in the selected area.
    a. Do this in the yard, a field, or grassy area.
    b. If you do not have an area outside to throw the pieces of paper, 4 pictures are provided on the back of this sheet to use to count the pieces of paper (or use the 30-second video clip in the video lesson).
        i. Suggestion: If using the 30-second clip in the video, watch it 4 times, counting only 2 colors of paper each time you watch, to record in the data table.
7) Throw the pieces of paper across an area approximately 9.5 feet x 7.5 feet.
    a. Toss them in the air, and let them land on the ground.
    b. Try not to notice where specific colors/pieces land, but make sure they are not in bunches/clumps on the ground.
8) Now, search for pieces of paper.
    a. Take approximately 45 seconds. Get someone to time for you if possible.
    b. You may only pick up one piece at a time.
        i. Place the piece in your other hand, and then pick up another piece.
        ii. Then take the pieces inside to count.
        iii. Record the number of each color in the data table on the activity sheet.

iv. If using the video, you will do this for the two chosen colors each time you watch the video.

9) Be sure to clean up all the other pieces of paper from your grassy area when you are done.
10) Complete the remainder of the activity sheet and questions.

Pictures to use for counting (if needed).

Word Bank
least: smallest number
most: biggest number

Adaptations/Variations Lab Sheet

1) Before you begin the activity, write your hypothesis about which color you will find **the least of** outside. (If…then…because…) Example: **If** I throw the papers on the grass, **then** I will find the least of the color _____ **because** _____.

Data Table

Color	Blue	Green	Brown	Orange	Yellow	Red	Purple	Black
#								

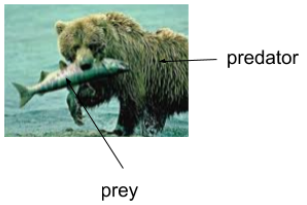
Answer the following:

2) Which color did you find the most?

3) Which color did you find the least?

4) Was your hypothesis correct? Why/why not?

5) Imagine that these pieces of paper were small ***prey*** animals. Why do you think certain colors were found more easily than others by the ***predator*** (person picking them up, in this case, you)?



I could find the color _____ more easily because _____.

The predator can find _____ more easily because _____.

6) How do the answers to #2-5 illustrate *Natural Selection*?

7) Create, and describe, a situation in which the two colors you found the **most of** outside, would be what you would find the least of; given the same constraints. Example: I would **not** find the colors _____ and _____ easily if _____.