math mark

math activities that reach kids

GRADE 6
STAAR Prep & Go!

lead4ward®

STAAR PREP & GO! – TEACHER PAGE

Purpose Each **STAAR Prep & Go!** activity addresses one Readiness Standard Student Expectation (SE) with 2–3 problems that represent the variety of ways that STAAR has assessed (or may assess) the SE. Students learn to read a problem, recognize what the problem is asking them to do, and answer the right question.

Students work through a Guided Analysis of the problems, seeing a variety of ways the content has been tested, examining both right and wrong answer choices. Each activity also includes a Journal that dives deeper into subtleties that some middle students miss.

These activities may be used in pairs, small groups, or during teacher-facilitated tutoring/intervention sessions.

Note: The problems in this resource represent a mix of multiple choice items and interactive item types included on STAAR assessments. While not identical to interacting with these items electronically, the goal in this resource is to build on the thinking and reasoning skills necessary to be successful on STAAR assessments.

This symbol is used to denote problems that model non-multiple choice item types that may appear on STAAR along with the name of the item type in blue text (listed on Answer Key pages where applicable).

Setting Up For Instruction

- ☐ Use the **Table of Standards** (PG. 3–4) as a reference and to link directly to content for each Student Expectation.
- ☐ Make 1 copy of the **Problems**, **Analysis**, and/or **Journal** student pages for each selected Student Expectation.
- ☐ Other materials:
  - ☐ **Highlighters: 1 per person**
  - ☐ **Grade 6 STAAR Reference Sheet:** 1 per person
  - ☐ **Calculators**: 1 per person
  - ☐ Any other materials a student is allowed to use to meet their accommodations

How-To Guide

1. Hand out materials.
2. Students place the **Problems** and the **Analysis** pages side by side. Rather than solving the STAAR problems first, students use the **Analysis** to guide them through the solution process to the STAAR problems. The **Analysis** page will help them see both the similar and different ways a concept is tested. It helps them identify clues in the problems that tell them what math to perform.

   Use the **Journal** page based on individual student needs. The **Journal** page is designed to:
   - Do a deeper dive into the content.
   - "Loopback" to necessary vocabulary.
   - "Loopback" to supporting skills needed to resolve Readiness Standard problems.

Directions: Place your Problems and Analysis pages side by side. Follow the directions on the Analysis page.

1

The table shows the time Noah spent on his bike and the distance he rode during 4 different months.

Noah's Distance

Time Noah Rode (hours)	Distance Noah Rode (miles)
12	232.8
14	271.6
18	349.2
22	426.8

Based on the information in the table, how far will Noah have ridden if he rides for 25 hours?

A 485 miles

B 465.6 miles

C 504.4 miles

D 501 miles

2

Mr. Rudolph asked a group of students to choose their favorite kind of popcorn for a school party. The results of the survey are shown in the graph.

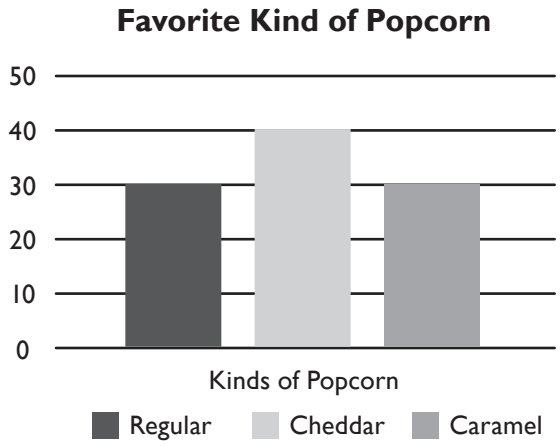
Based on the graph, how many students in a group of 170 would not choose cheddar as their favorite kind of popcorn?

A 102

B 68

C 60

D 40



3

Inline Choice

Eddie was making sandwiches for his friends. On the first sandwich, he used 3 teaspoons of mustard for every 4 square inches of bread. On the second, he used 2 teaspoons of mustard for every 3 square inches of bread. The sandwiches both had 24 square inches of bread.

Highlight the correct answers to make a true statement.

The [first sandwich / second sandwich] used more mustard because [2 : 3 is greater than 3 : 4. / 3 teaspoons is more than 2 teaspoons. / 3 : 4 is greater than 2 : 3.]

Back to the Table of Standards

Directions: Place your Problems and Analysis pages side by side. Follow the directions on the Analysis page.

1. All of these problems involve ratios and rates. Read each problem, but don't read the solutions. Try to find the word *ratio* or *rate*. How many times did you see each word in the problems? None
2. In the second sentences (the questions) for Problems #1 and #2, highlight the first two words.

   The words *based on* mean that you are going to use the information in the problem to make a prediction.
3. In Problem #1, what are you predicting?

   How far Noah rode in 25 hours

   What information should you use to make your prediction?

   The relationship between the hours and the distance Noah rode
4. In Problem #2, what are you predicting?

   The number of students out of 170 who would not choose cheddar as their favorite kind of popcorn

   What information should you use to make your prediction?

   The total number of students and the number of students who chose cheddar or the number of students who chose regular and caramel
5. In Problem #3, read the paragraph before the question. Yikes! It's a little complicated.
   a. Slow down and read the first sentence. Draw a picture of the sandwiches. Label them #1 and #2.
   b. Read the second sentence. Write down the information about sandwich #1.
   c. Read the third sentence. Write down the information about sandwich #2.
   d. Fill in the sentences below.

      The first sandwich used ___3___ teaspoons for 4 square inches.

      The first sandwich used ___18___ teaspoons for 24 square inches.

      The second sandwich used ___2___ teaspoons for 3 square inches.

      The second sandwich used ___16___ teaspoons for 24 square inches.
   e. Read the question and highlight the word *true*. In the sentence stem, highlight the word *because*. For the answer to be correct, the reason has to match the conclusion.

      Which reason can you strike out because it does not refer to a ratio?

      3 teaspoons is more than 2 teaspoons.

      Look at the first reason and the last reason. Which one is a true statement?

      3:4 is greater than 2:3.

      Now look back at the problem. Which sandwich has 3:4 ratio of mustard?

      The first sandwich

ANALYSIS

Directions: Use the analysis and problems to generalize how to solve the problems.

Have you ever made lemonade from a powder? The can tells you how much powder to use with a certain number of ounces of water. If you put too much powder, the lemonade will be too lemony. If you put too little, it will be watery. The ratio of lemonade powder to water makes the perfect lemonade.

It's really nice if a problem says, "The ratio of…" You don't have to try to figure out the ratio. The problem just tells you what it is. However, these problems don't tell you the ratio. You have to read the problem and figure it out. The information that follows the words *based on* include the information you need to figure out the ratio.

Problem #1

1. What are the words after *based on*? the information in the table
2. Where do you find the rate in the problem? in the table
3. What are the units in the table? hours and miles
4. Pick a pair of numbers in the table. In the diagram below, write a ratio using those numbers and labels on the left side of the =.
5. What is the problem asking you to find? distance after riding 25 miles
6. On the right side of the diagram below, write a ratio using 25 hours. Use x for the missing miles.

$$\frac{12 \text{ hours}}{232.8 \text{ miles}} = \frac{25 \text{ hours}}{x \text{ miles}}$$

Problem #2

7. What are the words after *based on*? the graph
8. Where do you find the rate in the problem? in the graph
9. Read the question. What categories in the graph do you need to use? regular and caramel
10. How many chose regular or caramel popcorn? 60
11. What is the total number of students in the survey? (It's not 170.) 100
12. On the left side of the diagram below, write a ratio using the number of people who chose regular or caramel to the total number in the survey.
13. How are the numbers 100 and 170 related? They are the total numbers of people who will eat popcorn.
14. On the right side of the diagram below, write a ratio using a group of 170 people who will eat popcorn. Use x for the missing number of people who don't want cheddar.

$$\frac{60 \text{ people}}{100 \text{ total people}} = \frac{x \text{ people}}{170 \text{ total people}}$$

Problem #3

15. What are the words after *based on*? the above information
16. Where do you find the rate in the problem? in the paragraph above
17. The paragraph above gives two ratios. What are the ratios?
    3 teaspoons: 4 square inches 2 teaspoons: 3 square inches
18. Fill in the proportions below.

$$\frac{3 \text{ teaspoons}}{4 \text{ square inches}} = \frac{x \text{ teaspoons}}{24 \text{ square inches}} \qquad \frac{2 \text{ teaspoons}}{3 \text{ square inches}} = \frac{x \text{ teaspoons}}{24 \text{ square inches}}$$

JOURNAL

6.4B Ratios & Rates (Part 1) PROBLEMS

Directions: Place your Problems and Analysis pages side by side. Follow the directions on the Analysis page.

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Based on the graph, how many students in a group of 170 would not choose cheddar as their favorite kind of popcorn?

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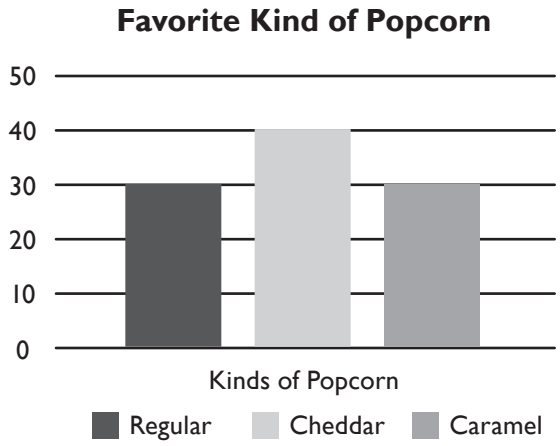

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Eddie was making sandwiches for his friends. On the first sandwich, he used 3 teaspoons of mustard for every 4 square inches of bread. On the second, he used 2 teaspoons of mustard for every 3 square inches of bread. The sandwiches both had 24 square inches of bread.

Highlight the correct answers to make a true statement.

The [first sandwich / second sandwich] used more mustard because [2 : 3 is greater than 3 : 4. / 3 teaspoons is more than 2 teaspoons. / 3 : 4 is greater than 2 : 3.]

6.4B Ratios & Rates (Part 1) ANALYSIS

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   What information should you use to make your prediction?
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   a. Slow down and read the first sentence. Draw a picture of the sandwiches. Label them #1 and #2.
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   d. Fill in the sentences below.

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      The first sandwich used _____ teaspoons for 24 square inches.

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   e. Read the question and highlight the word *true*. In the sentence stem, highlight the word *because*. For the answer to be correct, the reason has to match the conclusion.

      Which reason can you strike out because it does not refer to a ratio?

      Look at the first reason and the last reason. Which one is a true statement?

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ANALYSIS

6.4B Ratios & Rates (Part 1) JOURNAL

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1. What are the words after *based on*? _____
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3. What are the units in the table? _____
4. Pick a pair of numbers in the table. In the diagram below, write a ratio using those numbers and labels on the left side of the =.
5. What is the problem asking you to find? _____
6. On the right side of the diagram below, write a ratio using 25 hours. Use x for the missing miles.

$$\frac{\square\ \_\_\_\_}{\square\ \_\_\_\_} = \frac{\square\ \_\_\_\_}{\square\ \_\_\_\_}$$

Problem #2

7. What are the words after *based on*? _____
8. Where do you find the rate in the problem? _____
9. Read the question. What categories in the graph do you need to use? _____
10. How many chose regular or caramel popcorn? _____
11. What is the total number of students in the survey? (It's not 170.) _____
12. On the left side of the diagram below, write a ratio using the number of people who chose regular or caramel to the total number in the survey.
13. How are the numbers 100 and 170 related? _____
    _____
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JOURNAL