



LESSON 7 RACE TRACK MATH

START YOUR ENGINES!

ASK: Tell your child what the letters STEAM stand for? (Science, Technology, Engineering, Arts and Math)

SAY: STEAM skills help prepare you for your future. Many jobs in the 21st century require knowledge in these areas—as well as being able to work with a team, think creatively, communicate well in writing and speech and solve tricky and challenging problems. You’ve worked hard to fine tune your science, technology, and engineering skills as you completed this unit. Now it’s time to strengthen your math muscle as we race around the track solving problems in adding, subtracting, multiplying or dividing!

REVIEW the Mathematical Practice chart below.

SAY: Strong mathematicians use certain skills or practices to help them solve problems. Let’s review these skills together. Today you will use many of these skills to win the race.

OBJECTIVES

Your child will:

- Practice collaboration, communication and critical thinking skills
- Solve math problems using a variety of Common Core Mathematical Practices

You will need:

- Race Track Math
- Scratch paper for working solutions

MATHEMATICAL PRACTICES		KID FRIENDLY VERSION
1	Make sense of problems and persevere in solving them	I try different ways to solve a problem
2	Reason abstractly and quantitatively	I solve problems in my head and on paper
3	Construct viable arguments and critique the reasoning of others	I explain my math thinking and talk with others about their thinking
4	Model with mathematics	I use symbols and numbers to solve problems
5	Use appropriate tools strategically	I know how to choose the best tool to help me solve problems
6	Attention to precision	I check my work to see if it is correct. I use labels and am accurate
7	Look for and make use of structure	I look for patterns to help me solve problems
8	Look for and express regularity in repeated reasoning	I see when patterns repeat and look for short cuts



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GO!

Give your child the “Race Track Math” Worksheet

PIT CREW OPTION:

If possible, have your child work with a friend or family member over the phone or other form of connection.

SAY: *To win this race, you’ll need the help of the pit crew. Just like NASCAR drivers, you can’t do it on your own. Work with others to solve the math problems and challenges.*

PRACTICE PROBLEM

WRITE: 34 cars are ready for the race! Each car has a driver and a pit crew of five mechanics. How many total drivers and mechanics are ready to race? (A: 204)

SAY: *Let’s read the problem together. What are we trying to answer? (A: How many total drivers and mechanics are ready to race?) Let’s underline the question. What are key pieces of information in the problem that we need to use? (A: 34 cars each with 1 driver and 5 mechanics) Let’s circle the key information.*

Draw a picture as you read so your child can see a car with 1 driver and 5 mechanics for a total team of 6.

REVIEW answers and discuss different approaches to finding the solution.

ASK: *Which Mathematical Practices did you use to solve this problem?*

SAY: *Are you ready to begin the race? Then start your engines and go!*

ALLOW time to complete the worksheet.

REVIEW answers. **ASK:** *Which problems were easiest to solve? Which were the most difficult? Which Mathematical Practices did you use?*



LESSON 7

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VICTORY LANE – BEYOND THE RACE!

- 1. Tally and Graph!** Tally the Mathematics Practices your child used. Graph the results in a bar graph. Which practice is used most often?
- 2. Race On!** Ask your family and friends to create race track word problems and create their own Race Track Math game board.
- 3. Write On!** Ask your child to respond in their journals to the following prompt: Which is more important: Being strong in mathematical skills (adding, subtracting, multiplying and dividing) or being strong in mathematical practices? Are they both important? Why?

STUDENT NAME: _____

STEAM AT SONOMA RACEWAY:

SONOMA RACEWAY MATH CHALLENGE

The Toyota/Save Mart 350 at Sonoma Raceway is a challenging NASCAR® race that's very different from the normal oval-shaped track. It takes incredible skill and concentration to finish in first place.

Are you ready for a challenge? Use your math skills to make your way around the Sonoma Raceway track. After you complete each word problem, color in that segment of the track. How quickly can you make your way around the track?

If you get stuck on a problem, get help from your pit crew (family members).




Sonoma Raceway's STEAM Family Learning Guide is made possible through a partnership with Friedman's Home Improvement and Kid Scoop News.