

BE A MATH NINJA

ACTIVITY INSTRUCTIONS

Lesson: Race to Save the City

Tiered For: Grade 6 (or additional challenge for grade 5)

Objective: Students will be able to solve unit rate problems involving distance, rate, and time.

Materials: Race to Save the City Student Worksheet, calculators (optional)

1. Present the following problem to the class: You have a hankering for a hot fudge sundae, and the best ice cream shop in the state opens at 11 a.m. If you live 10 miles from the shop and the speed limit on the road is 40 miles per hour, when should you leave to get there when the shop opens?
2. Discuss with the class and make sure they understand that they should leave at 10:45 because it will take 15 minutes to get there ($10 \text{ miles}/40 \text{ mph} = .25 \text{ hour}$. $.25 \text{ hour} = 15 \text{ minutes}$ and $11:00 - 00:15 = 10:45$).
3. Indicate that there is a formula, distance = rate times time ($d=rt$), that is commonly used to solve this type of problem. Manipulate the equation to show that rate = distance/time and time = distance/rate.
4. Present the following problem for the class to solve in pairs: It took Sydney's family 2 hours to drive to an amusement park that is 80 miles away. How fast was the car traveling? ($80 \text{ miles}/2 \text{ hours} = 40 \text{ mph}$)
5. Distribute the worksheet to students to complete individually or in pairs. Calculators are optional.
6. Discuss answers as a class.

Answer Key: Lloyd, 2 hrs; Cole, 4 hrs; Nya, 1.5 hrs; Jay, 4.5 hours; Kai, 4 hrs; Zane, 1.5 hour

Race to Save the City

Master Wu has received word of yet another plot by Garmadon to capture NINJAGO City! He has summoned the ninjas to return to defend the city as quickly as possible. The ninjas are on missions at different locations on the island. Look at the data listed in the table and determine how long it will take each ninja to return to the city.



Name	Distance From City (in miles)	Vehicle Speed (mph)	Time to Return to NINJAGO City
Lloyd	120	60	
Cole	180	45	
Nya	90	60	
Jay	90	20	
Kai	140	35	
Zane	75	50	