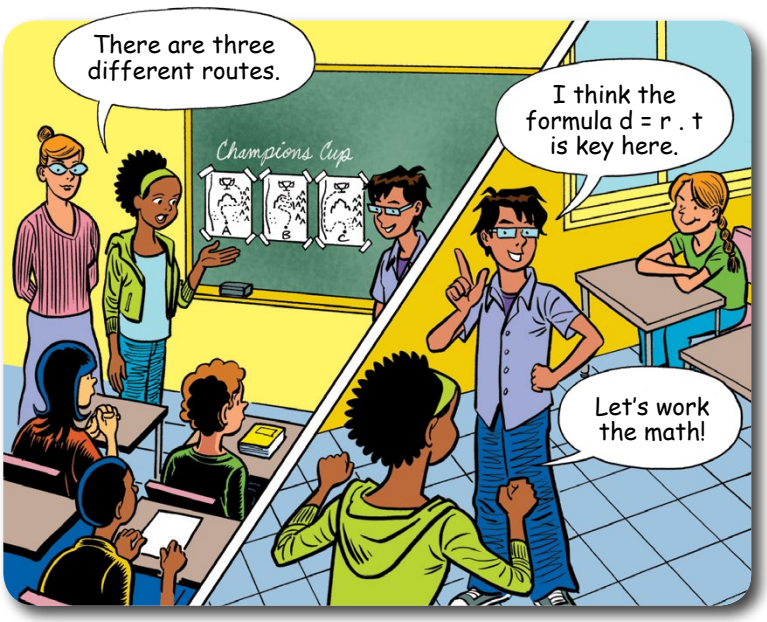
WORKSHEET #1

The Case of the Doubtful Distance

Solving the Unknown with Algebra—a new blog by 8th-graders Rick and Athena to solve questions and mysteries by using math—has received its first e-mail request!

"We've been asked to be advisors for the annual 7th-grade field trip to the state park," said Athena. "One of the homerooms is not sure of the best route to take to win the Champions Cup race!"

For the Champions Cup race, each homeroom receives a map showing alternate routes to the cup. "I think we should consider the formula ***Distance = Rate · Time (d = r · t)***," said Rick. "Check out this map":



KEY:

- = Route A
- = Route B
- = Route C

0 1 = 1,000 feet

ADDITIONAL CLUES:

Rates of speed for each route based on previous years:

Route A (rough terrain): 2,000 feet per hour

Route B (swampy): 3,000 feet per hour

Route C (flat and dry): 6,000 feet per hour

WORK THE MATH

Show your work—use separate paper as needed.

1 **How long is each route?**

Route A _____

Route B _____

Route C _____

2 **Using the formula $d = r \cdot t$, how long should it take to complete each route?**

Route A _____

Route B _____

Route C _____

NOW TRY THIS:

Imagine it takes you two hours to complete each route. At what rate would you be able to walk each route?