

MATH MAVEN'S MYSTERIES

Name: _____

Date: _____

The Cool Calculator Caper

Super sleuths, I need a break from chasing clever criminals, so I have come up with the ultimate plan — a way to make the criminals come to me!

I put this fake news flash in the morning paper:

“Are you a numbers fanatic, but can’t seem to put two and two together? Then the Cool Calculator is for you! It can be yours for the low, low price of \$4.00 at Eli’s Electronics in Point Logos. This electronic wizard is guaranteed to outsmart the most clever mathematician — even the Math Maven!”

I knew that my evil enemies would want the Cool Calculator to use against me. But we know better, don’t we, super sleuths? It takes more than a super-powered calculator to stop a crystal-clear thinker.

For my trap to work, I asked detectives from nearby towns to keep an eye on a few of the usual suspects.



REX TANGLE

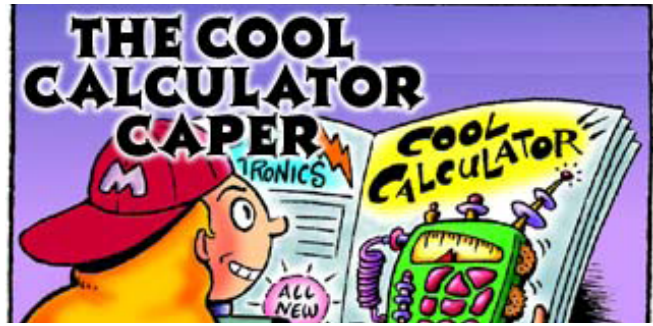
I received my first report from a detective 180 miles away in Shapetown. At 11:00 a.m., Rex Tangle was spotted leaving and driving toward Point Logos. He was driving 5 miles over the 55 miles an hour speed limit.

The next report came from a detective 160 miles away, where the Troublesome Triplets — Doris, Dottie, and Demi — were spotted at the Four Corners



DORIS, DOTTIE & DEMI

train station. The next express train for Point Logos was scheduled to leave at 11:30 a.m. The train travels 80 miles an hour and makes no stops.



Notes:

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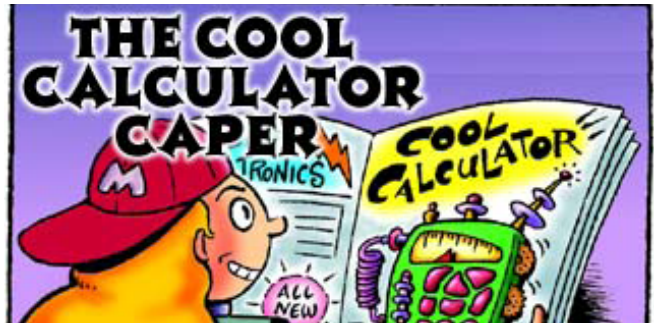
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PAT TERNS

Then I received a report from 30 miles away in Criss-Cross Center. At 11:00 a.m., the infamous Pat Terns was seen leaving town on her bike. She was pedaling at 15 miles an hour.



Notes:

The Mad Adder Finally, I heard from a detective in Onetown who had been keeping an eye on that sly villain, the Mad Adder. The Adder was spotted hopping on the 11:00 a.m. bus leaving for Point Logos. The bus travels 50 miles an hour and makes two 15-minute stops before Point Logos. The first stop is Twotown, 59 miles from Onetown. Forty-four miles later, the bus stops in Threetown. From Threetown, it's only 47 miles to Point Logos.



MAD ADDER



Name: _____

Date: _____

Solve the Mystery!

Detectives, the trap is set, but now I need your help. I fooled these clever criminals into coming after the Cool Calculator, but I need to be prepared for each one's arrival.

You'll need an important formula to figure out when the suspects will arrive in Point Logos: $\text{Rate} \times \text{Time} = \text{Distance}$. If you know any two parts of this three-part equation, you can figure out the third.

For example, if you ride your bike at 10 miles an hour (R) for 2 hours (T), how far did you ride (D)? Use the formula above and multiply the Rate (10) and the Time (2) for the Distance: 20 miles.

Here's another example: If you drive 80 miles (D) at the speed of 40 miles an hour (R), how long will it take (T)? You know from your formula that $R \times T = D$. To figure out time (T), divide each side of the equation by the rate (R) to get $T = D/R$. In the example above, divide the Distance (80) by the Rate (40) for the Time: 2 hours.

Note: The units of measurement for distance and time (such as miles and hours) must be used in the rate. For instance, if distance is measured in miles, and time is measured in hours, the rate will be measured by miles per hour. Rate could also be measured in kilometers per hour, or feet per second!

Okay, super sleuths, now it's your turn to use this formula! What time will each evil wrongdoer arrive in Point Logos? I'm anxiously waiting for your reports! (Fill in the time in the field by each character's name, like this: 12:00) :

A. Rex Tangle p.m.

B. Troublesome Triplets p.m.

C. Pat Terns p.m.

D. Mad Adder p.m.

Use this space to show your work: