

# Educator Answer Key

# Math Super Speed

## Activity sheet for grades 6–8

Make your visit to the *Speed* exhibition count! Here are sum ways you can add math to your Science Museum of Virginia experience.

### How Fast?

Complete the order of operations using numbers found around *Speed*!

$$1200 \div 60 - 12 + (5 \times 8) = 48$$

$$1200 \div \text{Speed of a diver in mph} - \text{Weight of the Racing Bike} \times (\text{Speed of a swimmer in mph} \times \text{Sprocket number in the World's Slowest Device that rotates once every 45 days}) = \underline{\hspace{2cm}}$$

### Geometry Search

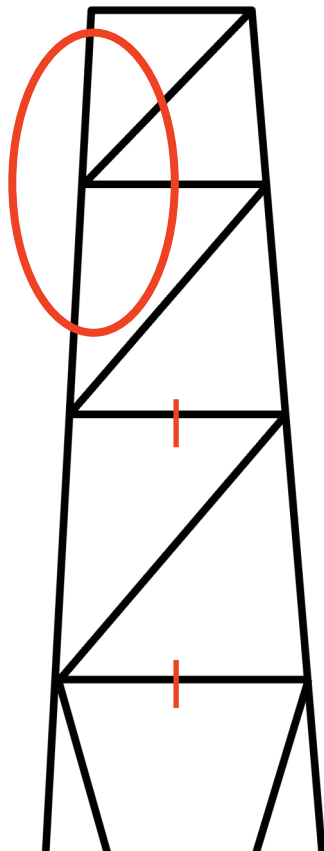
Look at the shape below. Where can you find that design in *Speed*? \_\_\_\_\_



Circle one group of angles that add up to 180 degrees (supplementary angles).

Draw tick marks on two parallel lines.

Mercury 7 Capsule, used by astronauts in space travel. Parallel lines are horizontal or diagonal lines, excluding the long, outside framing lines. Supplementary angles are any sets of angles adding up to 180 degrees.



### Extreme Weather: Human Wind Tunnel

Feel the wind! Hold this piece of paper at the triangles flat-side up. Which wind speed makes the paper bend and flap the most?

80 mph



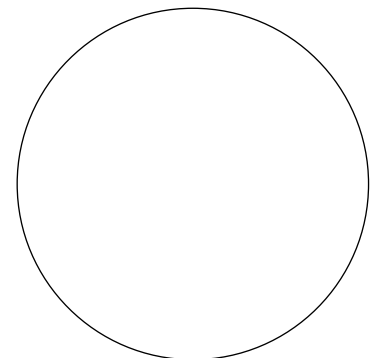
### Quick Poll

Ask 5–10 classmates about their favorite part of *Speed* from the five options below. Record the results in a table and create a circle graph from the data.

	Mark Their Favorite	Total
SR-71 Jet		
Quetzalcoatlus		
Sprint Track		
Fast Robot		
Pitching Cage		

Pie Chart (circle graph)

Key



Answers will vary.

## Outbreak! Spread of Contagion

Become a statistician! Run the simulation with any level of virulence, vaccination and lethality. What was the outcome?

$$\frac{\text{Decreased}}{\text{Recovered}} + \frac{\text{Recovered}}{\text{Total Areas Infected}} = \frac{\text{Total Areas Infected}}{\text{Total Areas Infected}}$$

Fraction of areas that recovered compared to total areas infected: \_\_\_\_\_

Is this fraction greater than 1/3? \_\_\_\_\_

Answers will vary.

## Take a Second Look

A blast from the not-so-distant past! Watch the video of the Science Museum entrance today.

What time did you come to the Science Museum?  
\_\_\_\_\_

How many minutes is that before or after school usually starts? \_\_\_\_\_

Answers will vary depending on the group, but students should have similar answers.

## Here Today, Polygon Tomorrow

Draw the largest polygon you see in *Speed*.

How many sides does it have? \_\_\_\_\_

Where is it located? \_\_\_\_\_

Answers will vary. It might be the 10-sided sound dish near the ceiling.

## Fast Facts

### *Quetzalcoatlus northropi*

This prehistoric pterosaur (which isn't a dinosaur) could fly by leaping 8 feet into the air and then flapping its strong wings!



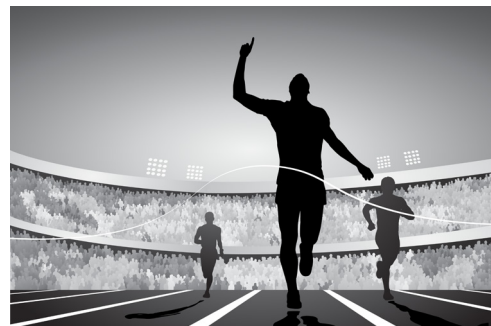
### Slowett Downs

Sloths have a slow digestive system compared to other mammals. It takes about 16 days to digest a single meal!



### Sprint Track

The Olympics started in Greece, where the running track was about 18 times longer than the Sprint Track in *Speed*!



## Just For Fun

### High-Speed Camera Studio

Make a slow-motion video in the booth near the Cottrell Theater!