

Mathematics

To find our previous newsletters click the link found here: [STEM East Newsletters](#)

Estimation Scavenger Hunt

Mr. Stadel of Estimation180 has put out a challenge to participate in an estimation scavenger hunt.

The directions are:

- 1) Measure your height.
- 2) Find an object that is: shorter than you, taller than you and equal to your height.
- 3) Estimate each object's height.
- 4) Measure each object to compare your estimation.

How close were you?

Take a picture and challenge a friend to see how close they can get!

estimation180.com

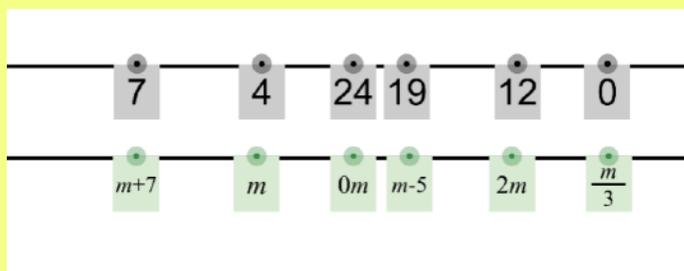


Clothesline Math

Each card on the top clothesline has a matching card on the bottom clothesline. First, find the value of m . Next, vertically match the top cards with the bottom cards. Finally, put them in order on the clotheslines.

Remember, watch your space and your place!

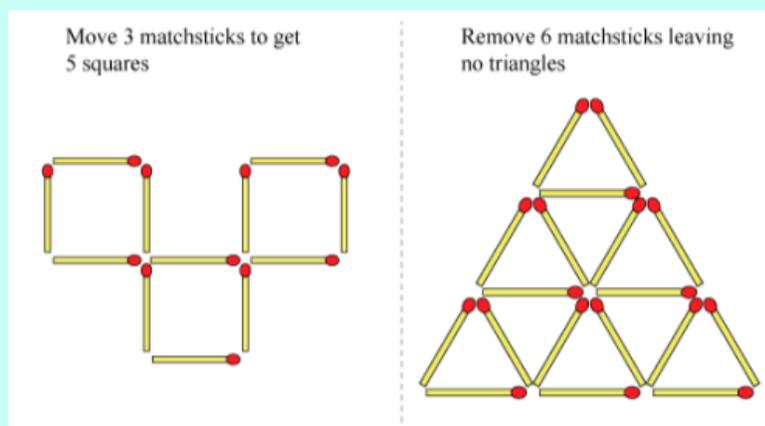
<http://www.estimation180.com/expressions.html>



Matchstick Puzzles

For more of these challenging logic puzzles visit the site below.

<https://www.mathinenglish.com/puzzlesmatchsticks.php>



Golden Teapot

Team A and Team B are perennial football rivals. Every year they meet for a series of games. The first team to win four games gets to take home the Golden Teapot and keep it for a year.

The teams are evenly matched except for a small home advantage. When playing at home, each team has a 51% chance of winning (and a 49% chance of losing. No ties are allowed.)

Every year, the first three games are played at the home of Team A, and the rest at the home of Team B.

Which team is more likely to win the Golden Teapot?

<https://www.theguardian.com/science/series/alex-bellos-monday-puzzle>

Creating a Gallery Wall (continued)

For this activity you will need your art piece from the Artful Math activity from Week 2. You will also need to create a new masterpiece (simple shapes in various colours will work for this). Place them on the wall, one above the other, leaving 30 cm between them in the centre of the wall. What considerations did you need to take into account to accomplish this?

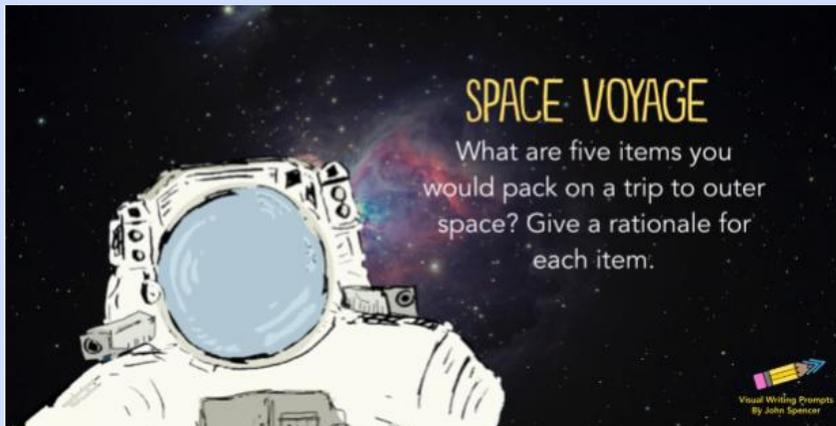
Place the art pieces next to each other leaving 60 cm between them. How does this differ from the first task?



Science

To find our previous newsletters click the link found here: [STEM East Newsletters](#)

What Do You Think?



For more activities like this check out John Spencer's website.
www.spencerauthor.com/prompts/

Design Challenge

Build a Marble Run!

Using tape, cardboard, paper towel tubes, milk cartons, shoe boxes, building bricks and/or any other material you have at home (be creative!), construct a marble run. Your challenge is to keep the marble rolling for the longest time possible.

Extension: Can you build onto your run to increase your time?

Considerations : Height of marble run (safety) and choice of material (parental permission).



Try this!

Some people love winter and snow so let's help them!

Using things from around your home, your challenge is to design something that will slow down the melt of an ice cube.

Why do you think it works\doesn't work?

Can you redesign your creation to beat your own record?



ARE YOU A MASTER OF REFLECTION?

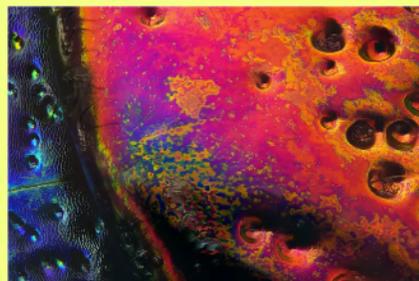


How many different ways can you colour the square with two colours such that :

- The only mirror line is the horizontal mirror line?
- The only mirror line is the right-sloping mirror line?
- The square has both horizontal and vertical mirror lines, but no diagonal mirror lines?
- The square has a diagonal mirror line and a horizontal mirror line, but not a vertical mirror line?

<https://www.theguardian.com/science/2020/mar/09/can-you-solve-it-are-you-a-master-of-reflection>

What is this?



<https://www.businessinsider.com/best-microscope-photography-nikon-small-world-2016-10#eyes-of-a-jumping-spider-2>

What do you notice?

What do you wonder?

What do you think this is?

To explore other microscopic images: <https://micro.magnet.fsu.edu/primer/java/electronmicroscopy/magnify1/index.html>