

## Riddles

**Materials:** None

**Directions:** The riddles here are short but may take some time to figure out. (Answers are on the last page.)

**Riddles:**

1. The man was almost out of breath. But home was in sight. Then he spotted a masked figure coming toward him. The running man stopped and quickly turned around. He ran all the way back to where he started. Why?
2. A girl with a fox, a goose, and a bag of corn wanted to cross a river. She could only take one animal or object at a time. The fox would eat the goose if they were left alone together; but if the girl took the fox first, the goose would eat the corn. How did the girl get all three safely across?
3. A man out jogging felt the first few raindrops fall. He didn't have an umbrella or a raincoat or a hat. He started jogging a little faster. It started to pour. The rain seeped through his clothing. His running shoes got wet. The rain rolled off the end of his nose. But his hair did not get wet. Why?
4. A woman had a sweet tooth. She put one spoonful of sugar into her coffee. She put in another. Then she put in two more spoonfuls into her cup. But the sugar did not get wet. Why?
5. IN medieval England, a king's jester was put into prison. (The king did not like the jester's jokes.) The jester was locked in a room at the top of a high tower. The jester found a piece of rope. It was not long enough to reach the ground. So, he divided it in half and tied the two halves together. This made the rope long enough so that he could escape. How?

## Problem-Solving

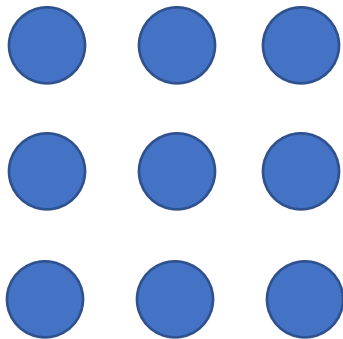
### Materials:

Pencil, paper, six drinking glasses, water, ten coins (or bits of paper), three rocks or other small objects, 3 sticks (pencils or strips of paper will work)

### Problems:

#### 1. A Classic Dot Problem

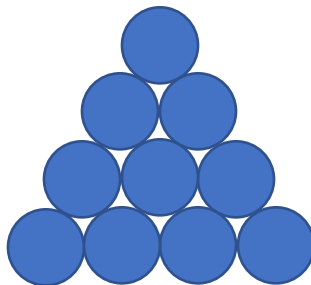
- a. Draw nine dots as below.



- b. Connect the dots without lifting your pencil from the paper. How many lines do you use? How would you use five lines? Four lines? Can you connect all the dots using only three lines?

#### 2. Change in Direction

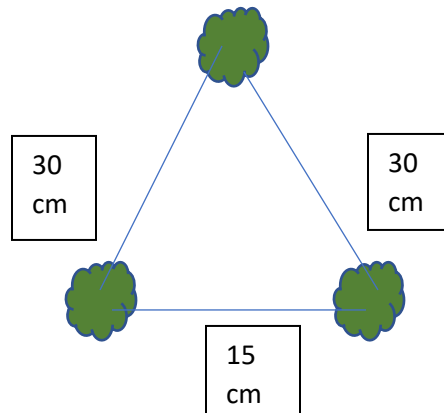
- a. Arrange ten coins or other small objects in the shape of a triangle.



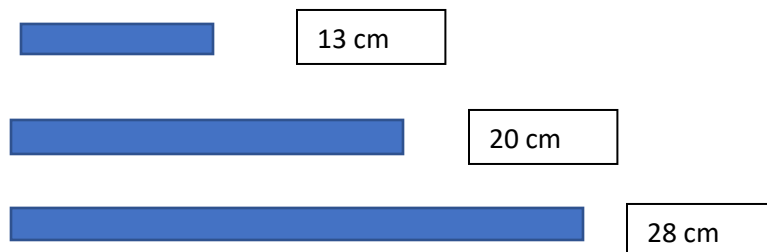
- b. The challenge is to make the triangle point in the opposite direction. You can move only three coins.

### 3. Volcanic Islands

- a. Arrange three “islands” (coins, rocks or other small objects) in an isosceles triangle (two sides are equal in length). The distance between islands A and B should be approximately 15 cm, and between B and C approximately 30 cm.



- b. There are three stick (or paper) “bridges.” One bridge is slightly less than the distance between A and B (approximately 13 cm). The second bridge is slightly less than the distance between B and C (approximately 28 cm). The last bridge is approximately 20 cm long.



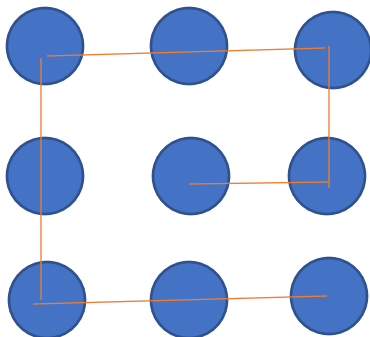
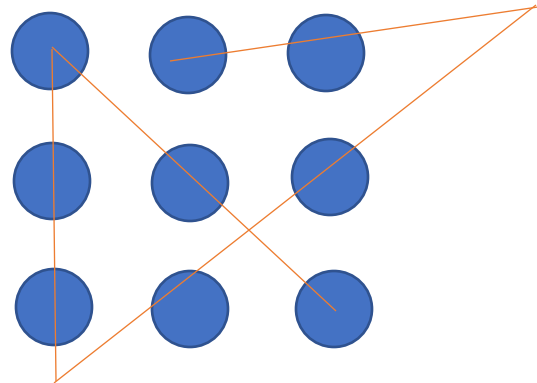
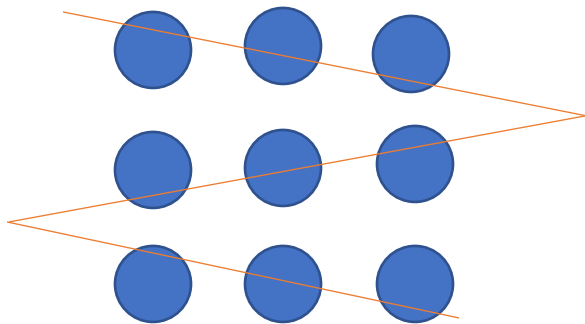
- c. There has been a shipwreck and the castaways are stranded on island A. A volcano is erupting on the island. Island B is a little safer than island A, but B’s volcano is rumbling. Island C is the safest. The challenge is to figure out a way – using on the given bridges to get to island C.

## Answers

### Riddles:

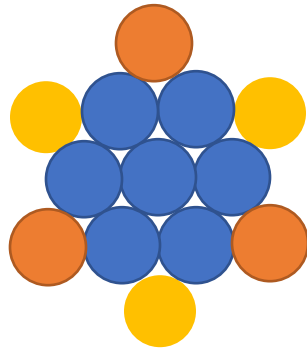
1. It was a baseball game. The masked man was the catcher. The player ran back to third base.
2. The girl crossed first with the goose and then returned. She then took the corn over and brought back the goose. Next, she crossed with the fox. Finally, the girl went back and brought back the goose.
3. The man was bald.
4. The coffee was instant, and the water had not been added yet.
5. The jester didn't cut the rope in half - he untwisted the two full strands that made up the rope. He then tied the two strands together and the rope was twice as long.

### Classic Dot Problem – Possible Solutions



**Change in Direction: Possible Solution**

(Orange dots move to yellow dots)



**Volcanic Islands: Possible Solution**

 13 cm bridge is not used.

