



# CHALLENGE 1

## MATCHSTICK GEOMETRIC SHAPES

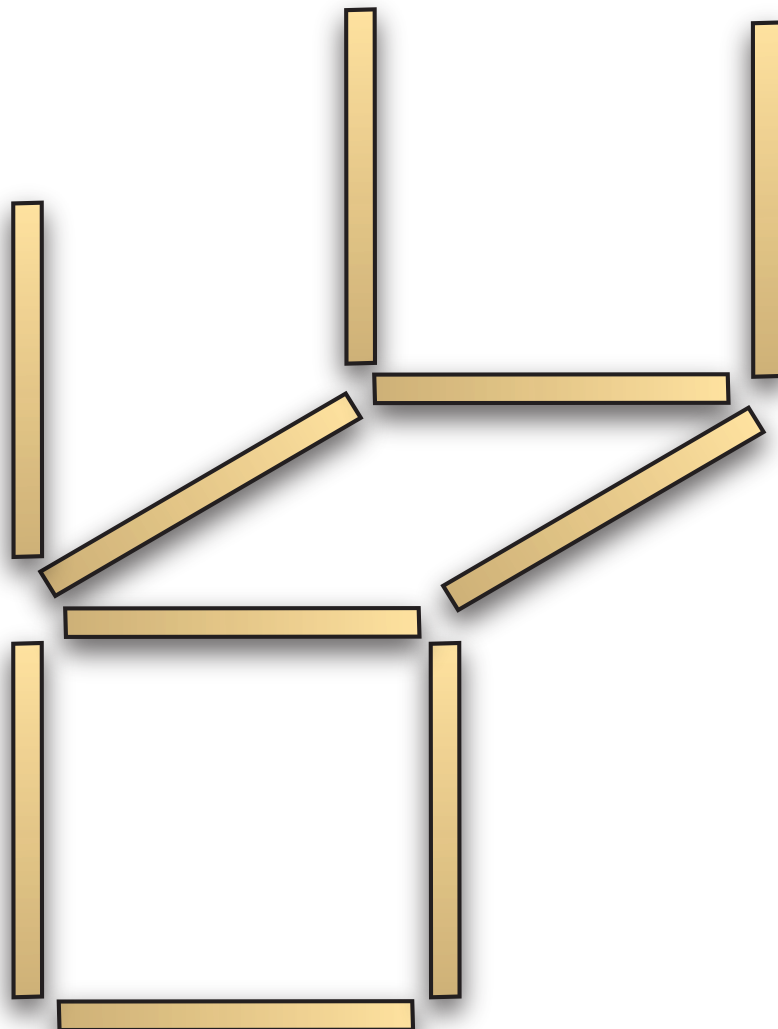
### Upright the Chair

#### Puzzle Set Up

Arrange the 10 sticks as shown in the illustration.

#### Your Goal

Move TWO matchsticks to create an upright chair.





## CHALLENGE 2

### MATCHSTICK GEOMETRIC SHAPES

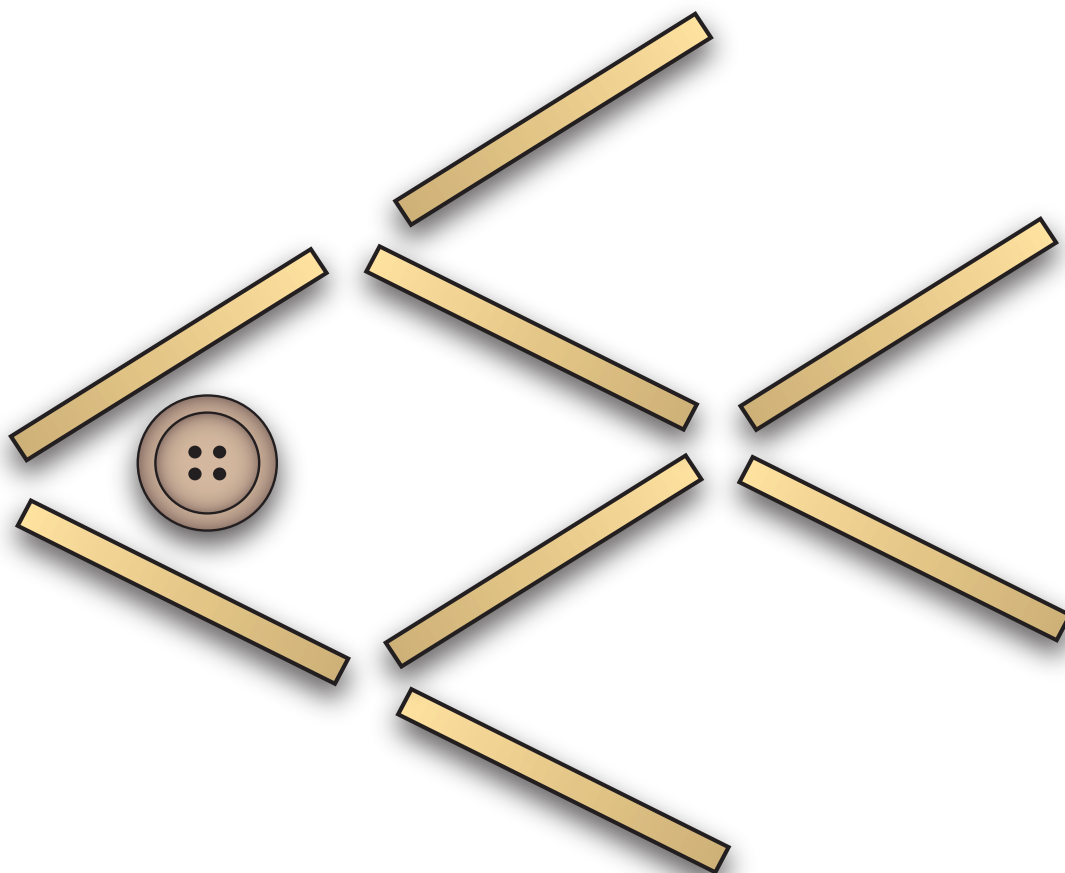
## Turn the Fish

### Puzzle Set Up

Arrange the 8 sticks and button to form an image of a fish swimming, as shown in the illustration.

### Your Goal

Move **THREE** matchsticks and the fish eye, to make the fish swim in the opposite direction.



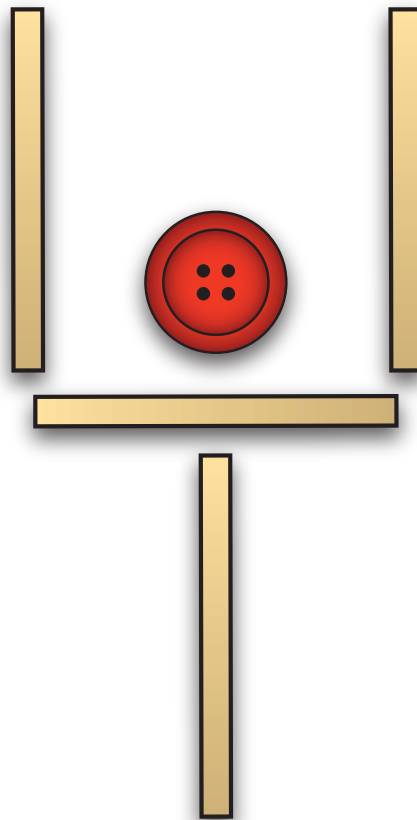


## CHALLENGE 3

# MATCHSTICK GEOMETRIC SHAPES Cherry in the Glass

Arrange the 4 sticks to form the image shown in the illustration.

Move TWO matchsticks to get the cherry out of the sundae glass. The glass may be turned in a new direction, but the cherry will not move and must end up outside the glass.





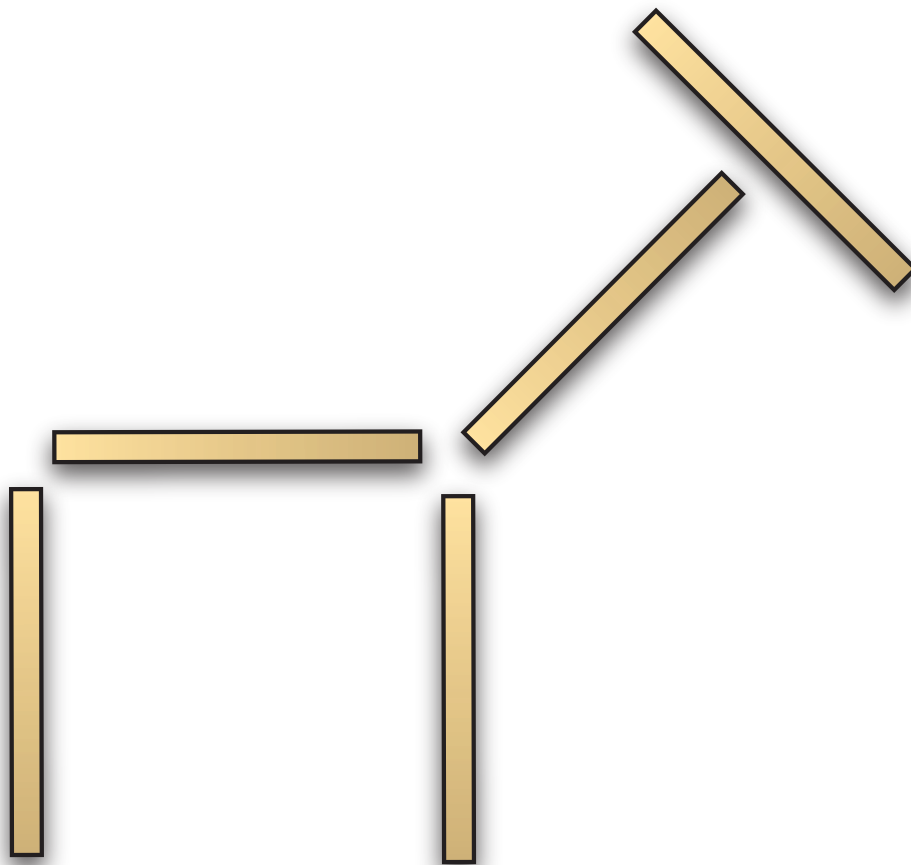
## CHALLENGE 4

# MATCHSTICK GEOMETRIC SHAPES Giraffe

### Puzzle Set Up

Arrange 5 sticks to form the image of a giraffe shown in the illustration.

Move only ONE stick so that the shape of the the giraffe is the same, but with the giraffe facing in another direction.





## CHALLENGE 5

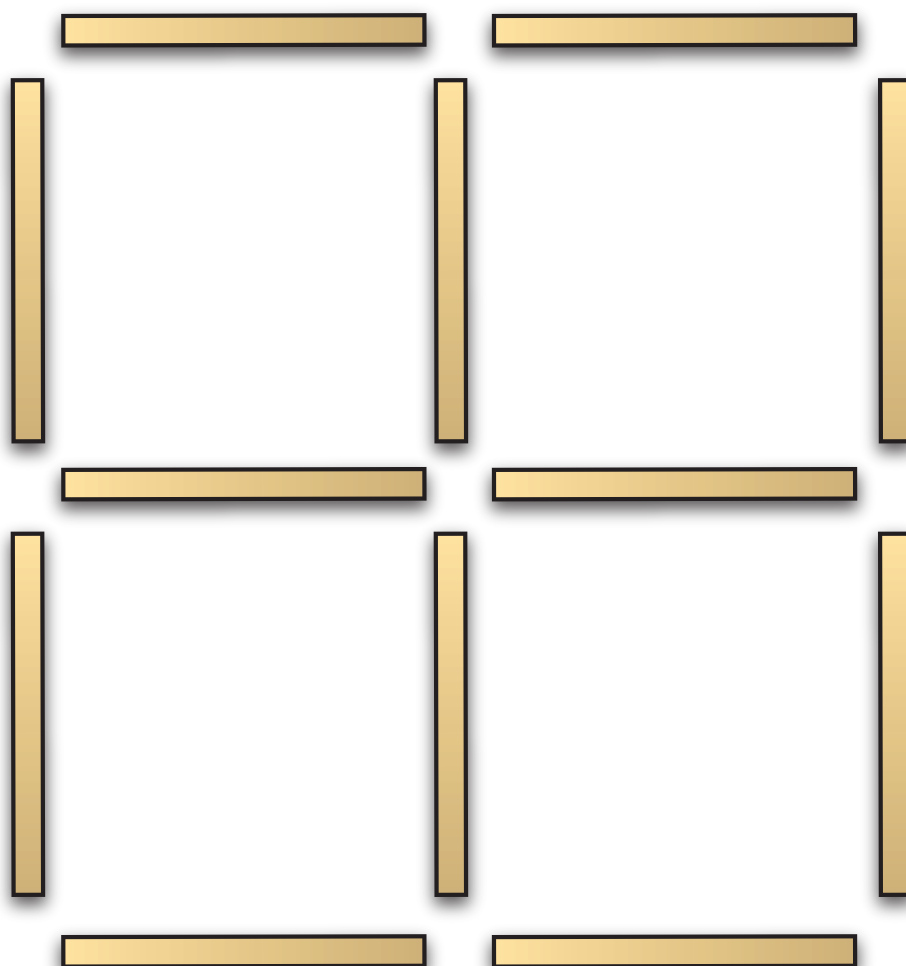
# MATCHSTICK GEOMETRIC SHAPES Square Root

### Puzzle Set Up

Place the 12 sticks into the start position as shown in the illustration below, with 4 squares.

### Your Goal

Remove TWO sticks from this pattern of sticks so that only two squares remain.





## CHALLENGE 6

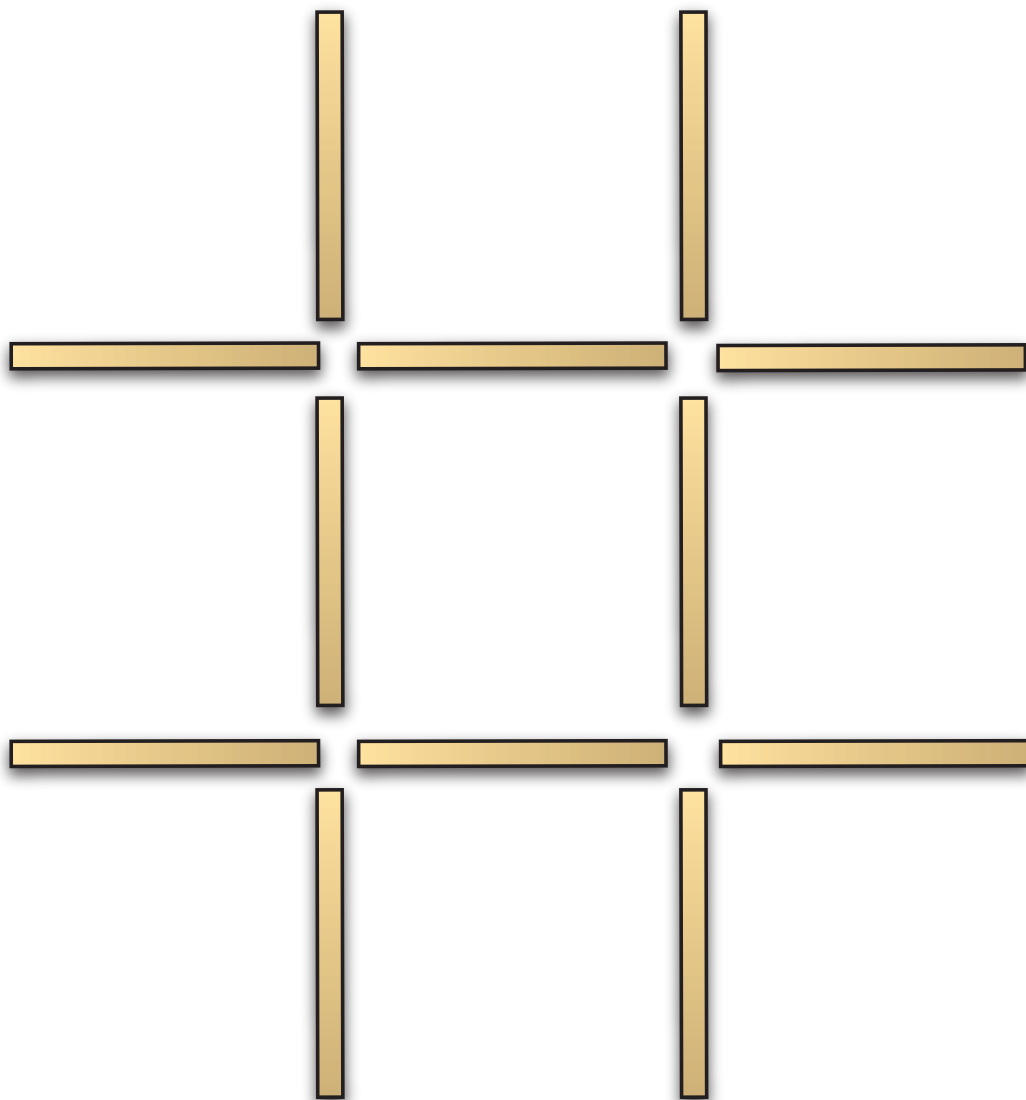
# MATCHSTICK GEOMETRIC SHAPES Beware 3 Squares

### Puzzle Set Up

Arrange 12 sticks as shown in the illustration.

### Your Goal

Move THREE matchsticks to make 3 identical squares.





## CHALLENGE 7

### MATCHSTICK GEOMETRIC SHAPES

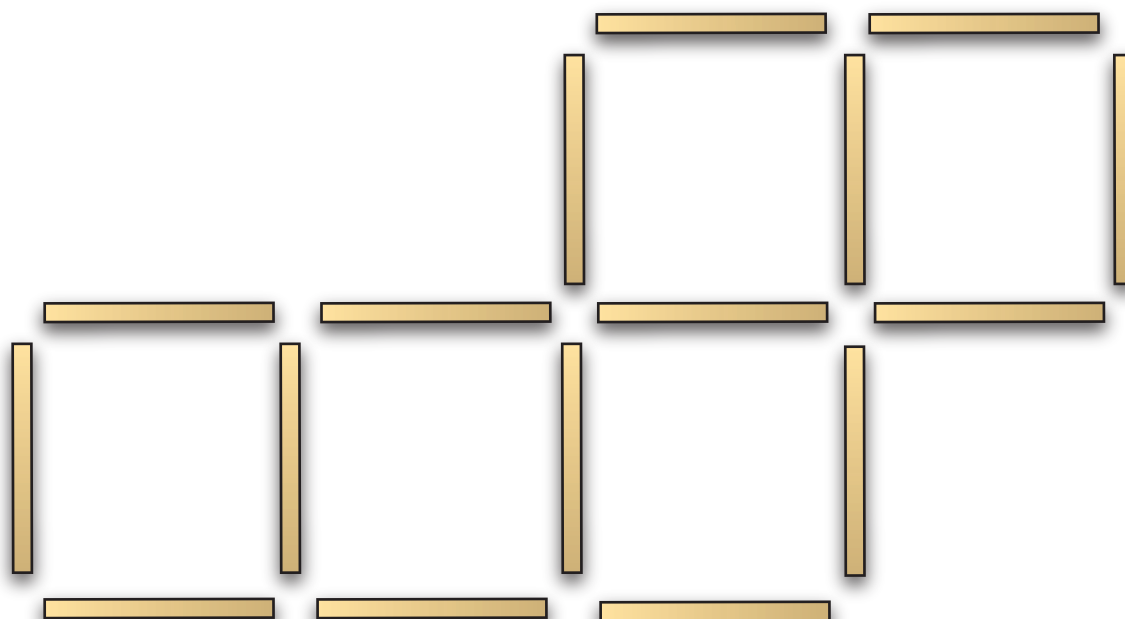
## Square Dance

### Puzzle Set Up

Arrange 16 sticks to make 5 squares as shown in the illustration below.

### Your Goal

Move TWO sticks to new positions to get exactly 4 identical squares instead of 5.





## CHALLENGE 8

### MATCHSTICK GEOMETRIC SHAPES

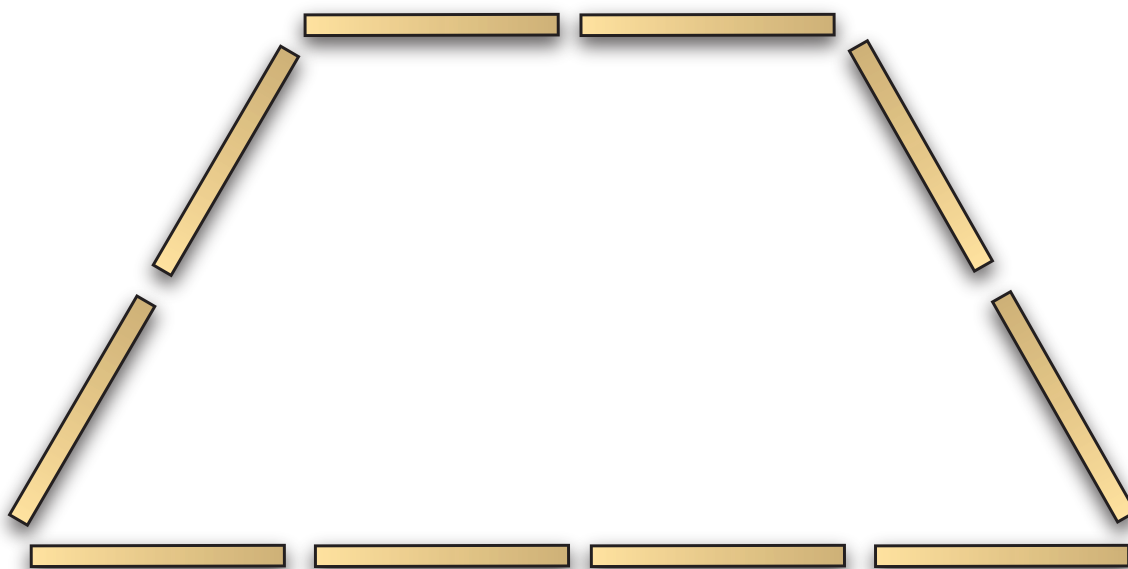
## Trapezoid Trap

### Puzzle Set Up

Arrange the 10 sticks to form an image shown in the illustration.

### Your Goal

Add FIVE more sticks to create 5 trapezoids without moving the original 10 sticks.







## MATCHSTICK GEOMETRIC SHAPES

### OBJECTS

#### Challenge 1 - Upright the Chair

- Notice that the body of the Fish uses 4 sticks in the shape of a diamond. Can you see another diamond by moving only 1 stick?

#### Challenge 2 - Turn the Fish

- Notice that the body of the Fish uses 4 sticks in the shape of a diamond. Can you see another diamond by moving only 1 stick?

#### Challenge 3 - Cherry in the Glass

- One move is really just a half move (or slide).

#### Challenge 4 - Giraffe

- The body of the Giraffe is three sides of a square. Can you see how another three sides could be used of that square by only moving 1 stick?

### GEOMETRICAL SHAPES

#### Challenge 5 - Square Root

- The two squares do NOT have to be the same size.

#### Challenge 6 - Beware 3 Squares

#### Challenge 7 - Square Dance

- Do you notice that there are 16 sticks? Since you want 4 squares,  $16 \div 4 = 4$  means that each square will need to use 4 sticks. This means that NO two squares will share a stick! Thus no two squares will be side-by-side! Do you see how four squares can be created NOT side-by-side in the layout? (further hint: think diagonally)

#### Challenge 8 - Trapezoid Trap