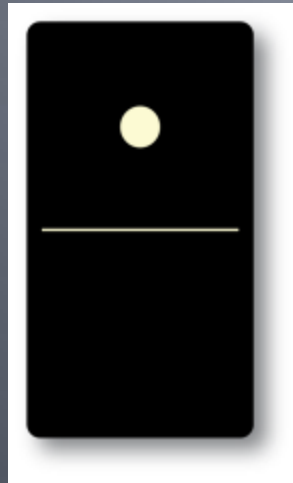
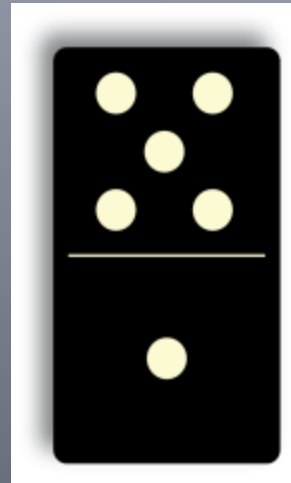


Previewing Dimensional Analysis

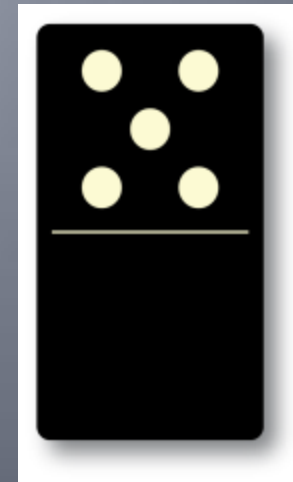
What's the Pattern?



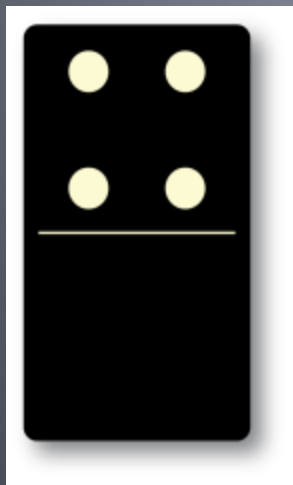
X



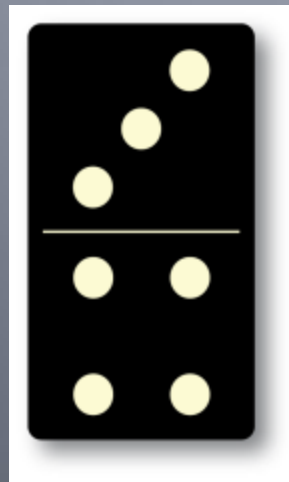
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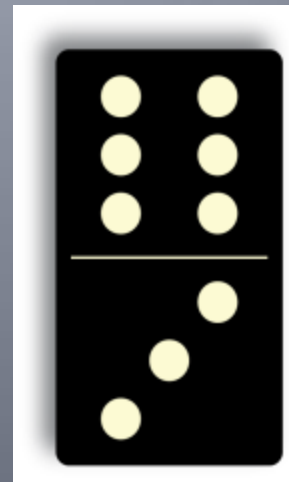
What's the Pattern?



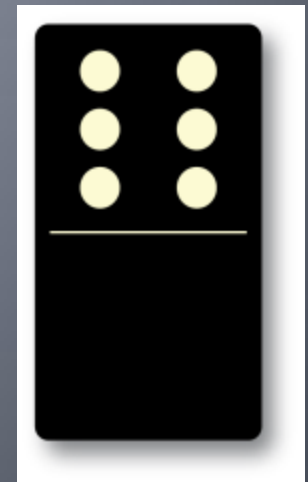
X



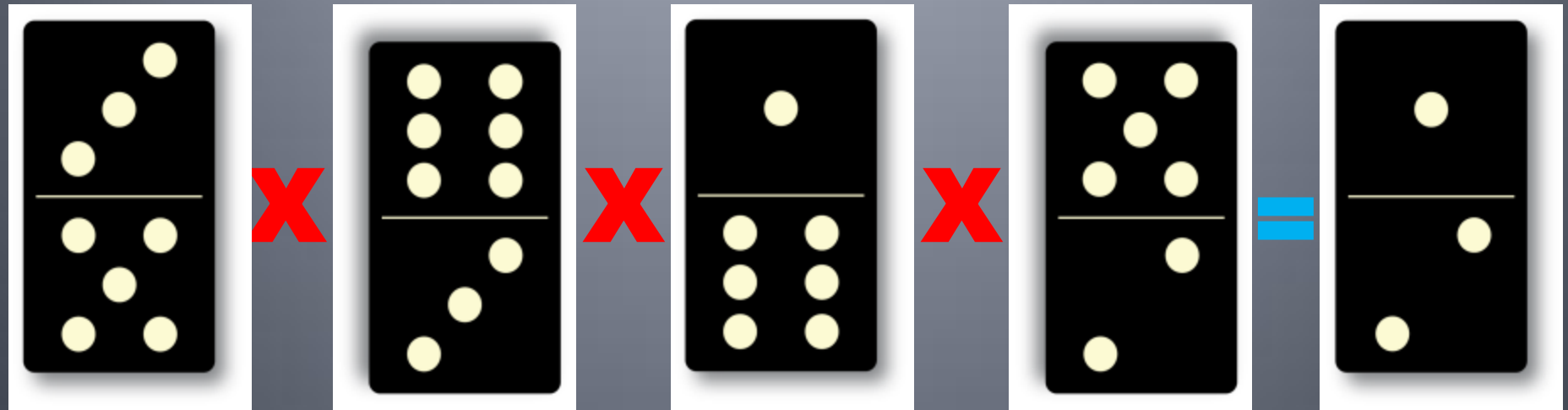
X



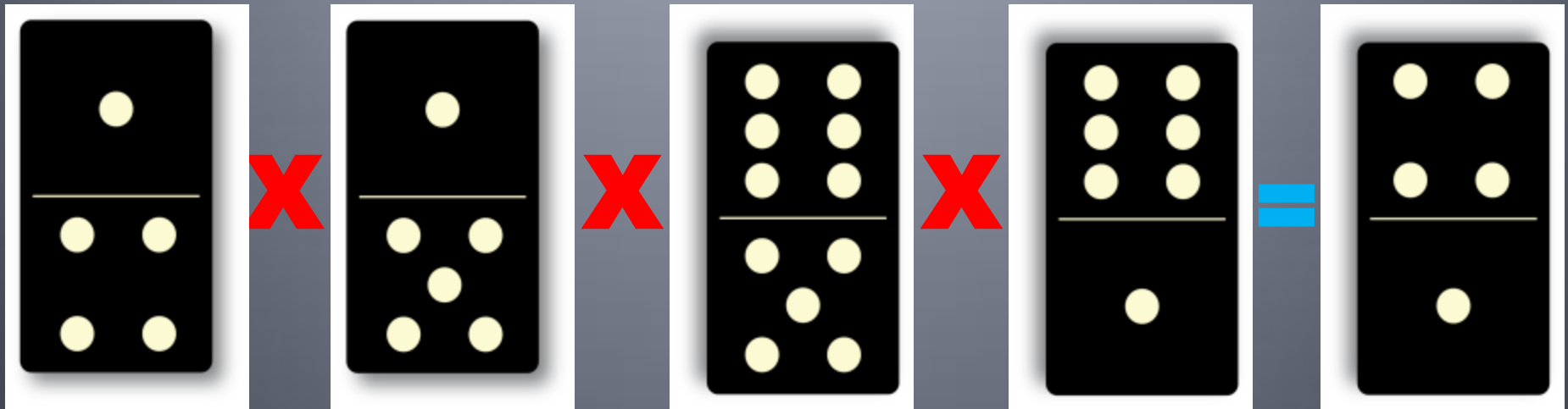
=



What's the Pattern?

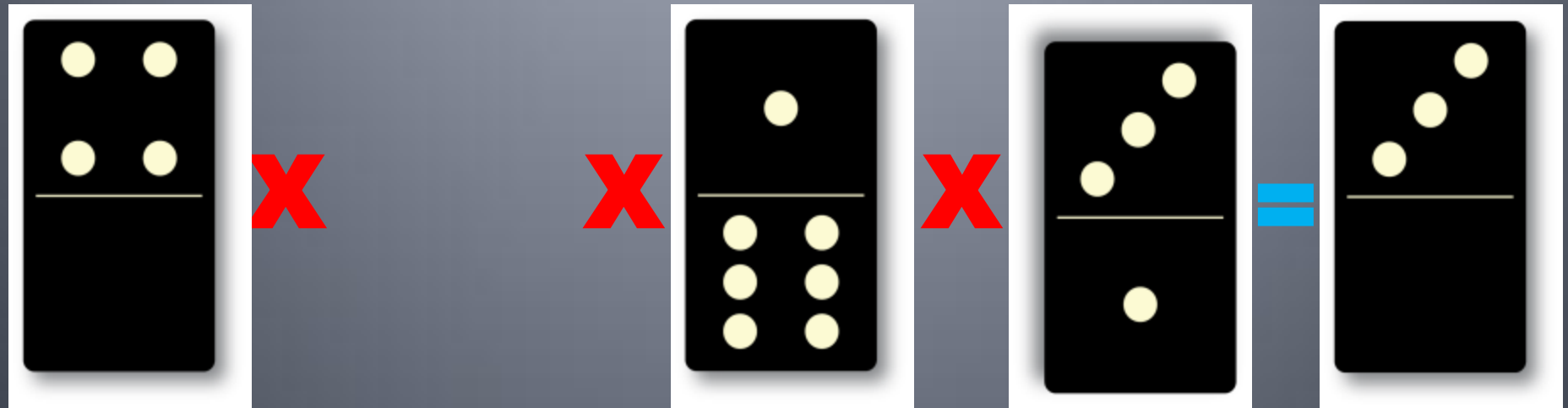


Circle the dominoes that need to be fixed?

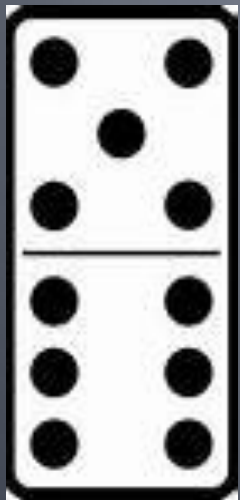


How can you fix the wrong dominoes?

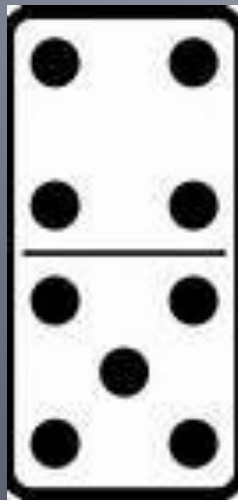
What's the missing piece?



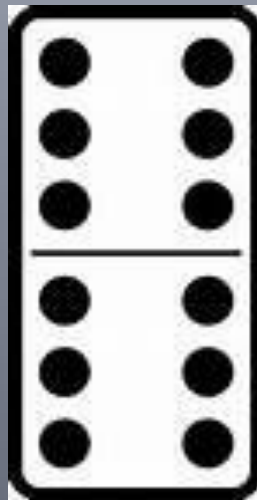
What's the missing piece?



X

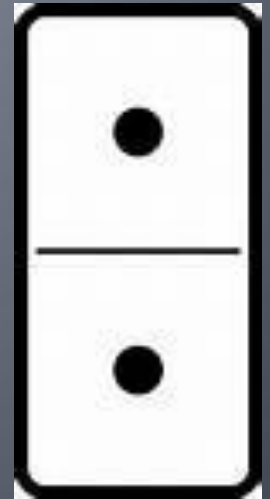


X



X

=



What information is missing?



Hint: Look at the units when trying to figure this out!

Convert: 55 miles to meters

Conversion Factors:

$$12 \text{ inches} = 1 \text{ foot}$$

$$5280 \text{ feet} = 1 \text{ mile}$$

$$2.54 \text{ centimeters} = 1 \text{ inch}$$

$$100 \text{ centimeters} = 1 \text{ meter}$$

55 miles	5280 ft		2.54 cm	
1	1 mile		1 in	

What information is missing?



Convert: 3 days to seconds

Conversion Factors:

24 hours = 1 day

60 seconds = 1 minute

60 minutes = 1 hour

3 days		60 min	
1		1 hour	

What information is missing?

Be Careful, this one is a little more challenging!



Convert: 25 kilometers per second to feet per hour

Conversion Factors:

24 hours = 1 day

60 seconds = 1 minute

60 minutes = 1 hour

5280 feet = 1 mile

1 mile = 1.609 kilometers

25 km	1 mi	60 sec
1 sec	1.609 km	1 min

The Rules of Dimensional Analysis

A powerful method of problem solving using fractions with units!

Steps:

1. Write the starting information on the left side of your paper.
2. Write what you are trying to find on the right side of the paper.
3. Solve by multiplying the starting information by the appropriate fractions, making sure the units are crisscrossed from each other and cancelled as appropriate.