Do Now
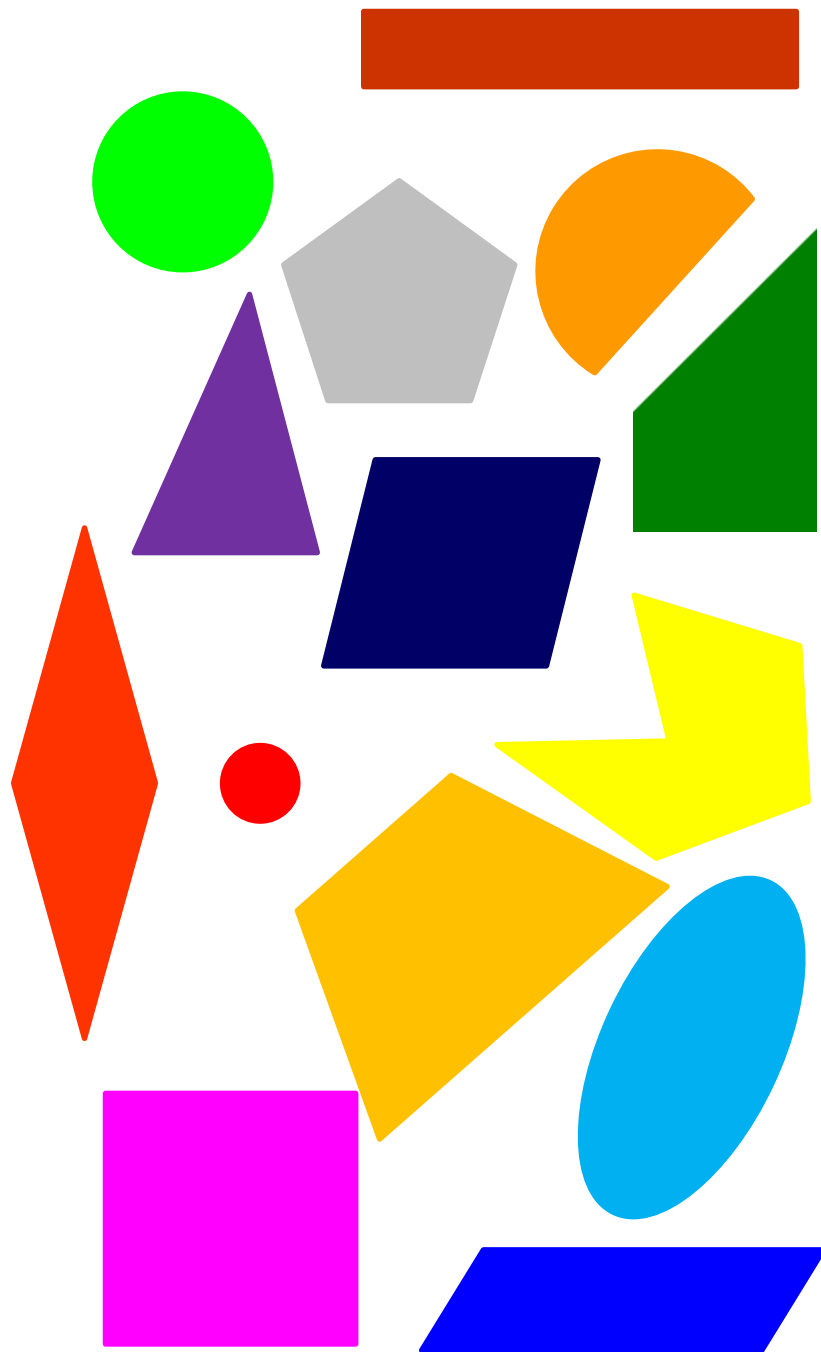
We will discuss the test results as soon as class starts. Please work on this Do Now. Thank you!

Consider these shapes.
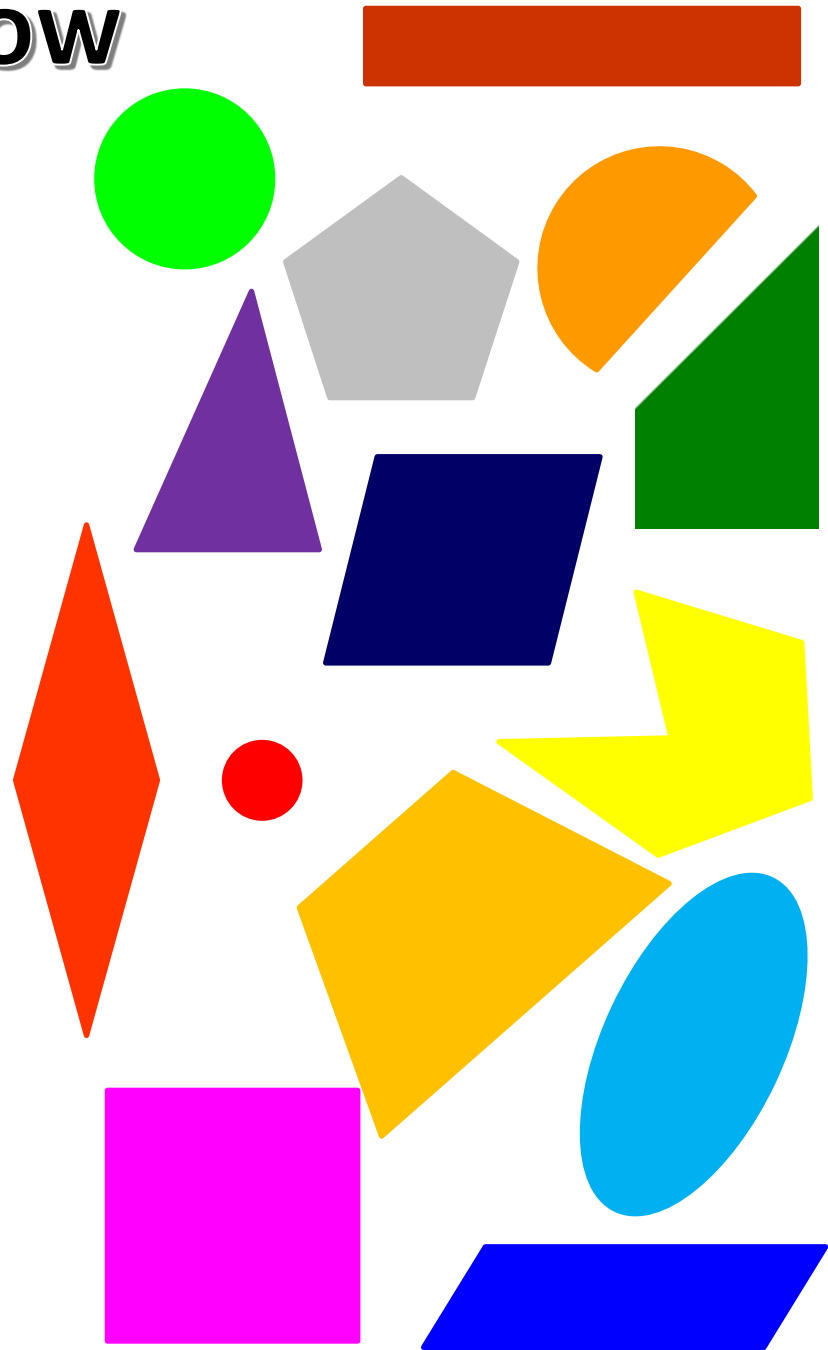
1) What is the ratio of polygons to non-polygons?

2) What is the ratio of trapezoids to quadrilaterals?

3) What is the ratio of parallelograms to circles.

Do Now

Consider these shapes.

1) What is the ratio of polygons to non-polygons?

2) What is the ratio of trapezoids to quadrilaterals?

3) What is the ratio of parallelograms to circles.

Ratio: A comparison of two quantities. Example: The ratio of circles to squares below is 3 to 2.

This ratio can also be written as 3:2, and, most usefully as $\dfrac{3}{2}$.
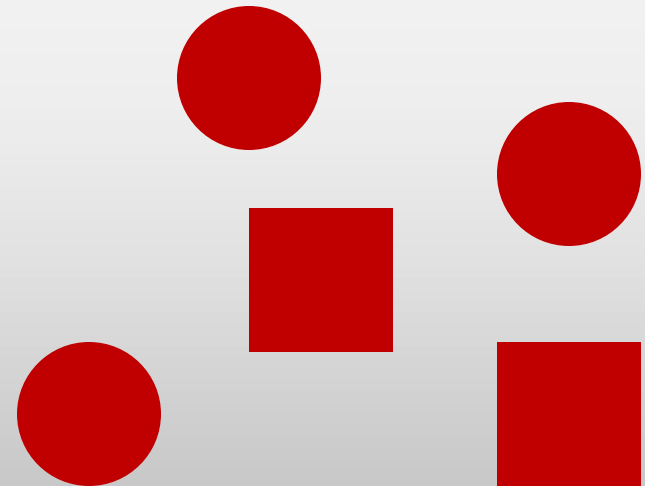
Rate: A ratio that compares the amounts of two **unlike** quantities.

Examples: If 6 apples cost $3 the rate of apples per dollars can be written as

$$\frac{6 \; apples}{\$3}$$

If we drive 325 miles in 5 hours we can express this rate as

$$\frac{325 \; miles}{5 \; hours}$$

<u>**Unit Rate**</u>:   The rate per 1 given unit.

Example: Using the rate for the cost of apples above, we could express a unit rate in terms of apples per dollar:

$$\frac{2\ apples}{\$1}$$

We could also express the cost per apple:

$$\frac{\$0.50}{1\ apple}$$

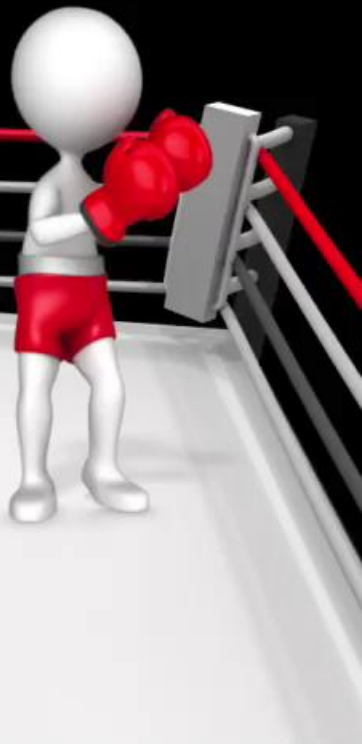The unit rate using the driving example above would be 65 miles per hour.

Proportion: An equation stating that two ratios (or rates) are equivalent.
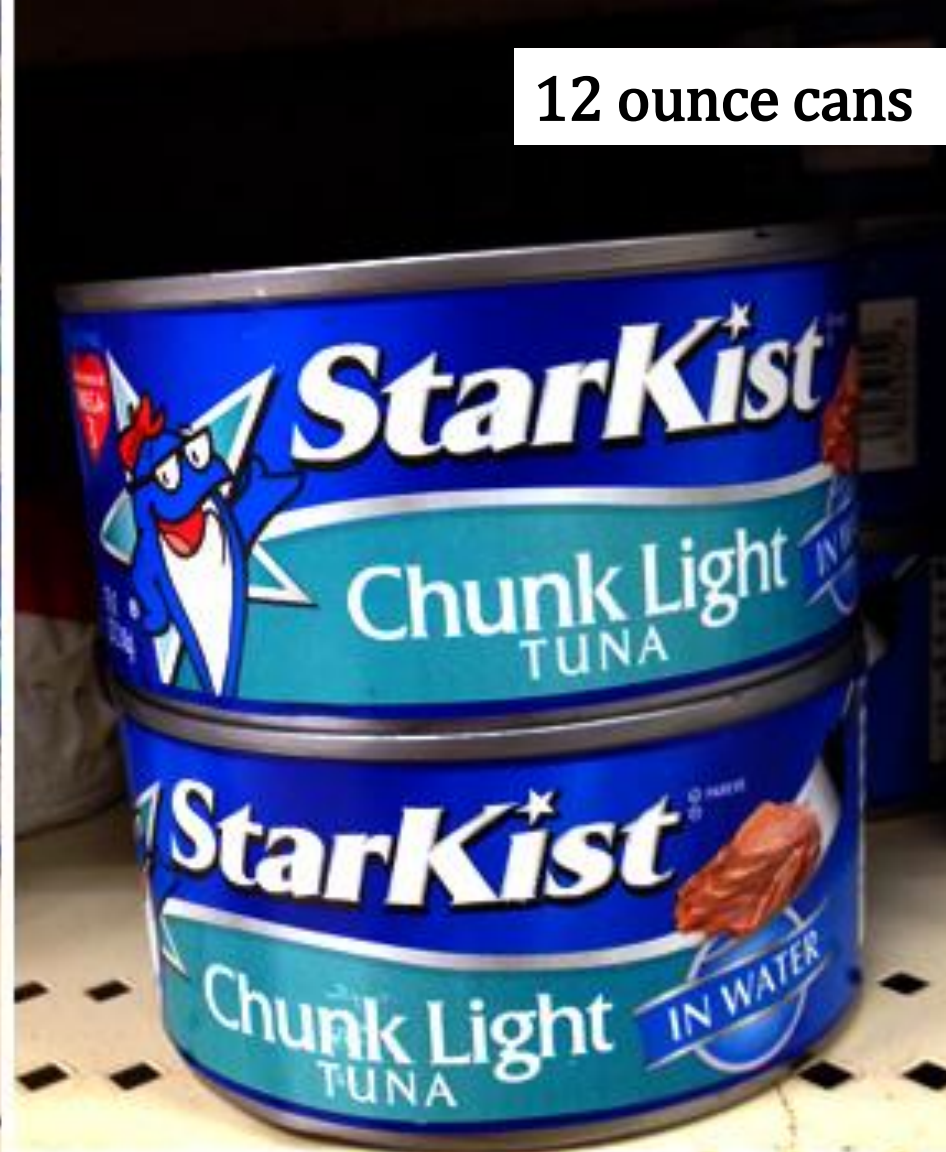
Examples:

$$\frac{1}{2} = \frac{4}{8} \qquad \frac{\$3}{6 \ apples} = \frac{\$0.50}{1 \ apple}$$

12 ounce cans

5 ounce cans

3.58
$ PER POUND

1.12
STARKIST CAN
CHNK LT H2O 5OZ

4.12
$ PER POUND

3.09
STARKIST CAN
CHNK LT H2O 12OZ

And now....

...one of the greatest moment in U.S. sports history

<u>Video</u>

In 2007, Joey Chestnut, reclaimed the mustard-yellow belt for America by eating 66 hot dogs in 12 minutes and defeating the reigning champ Takeru Kobayashi.

When we compare the quantity of hot dogs Joey Chestnut ate to the duration of the contest we get:

$$\frac{66 \text{ hot dogs}}{12 \text{ minutes}}$$

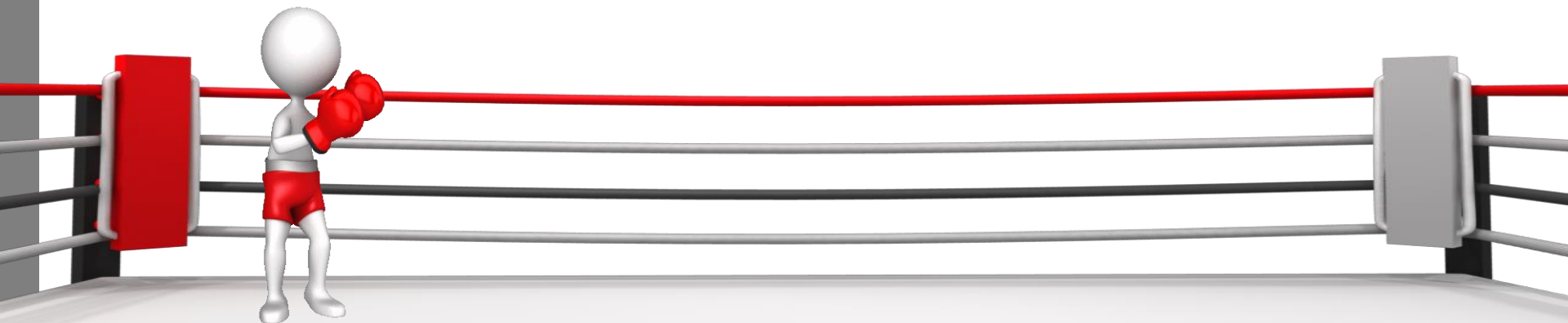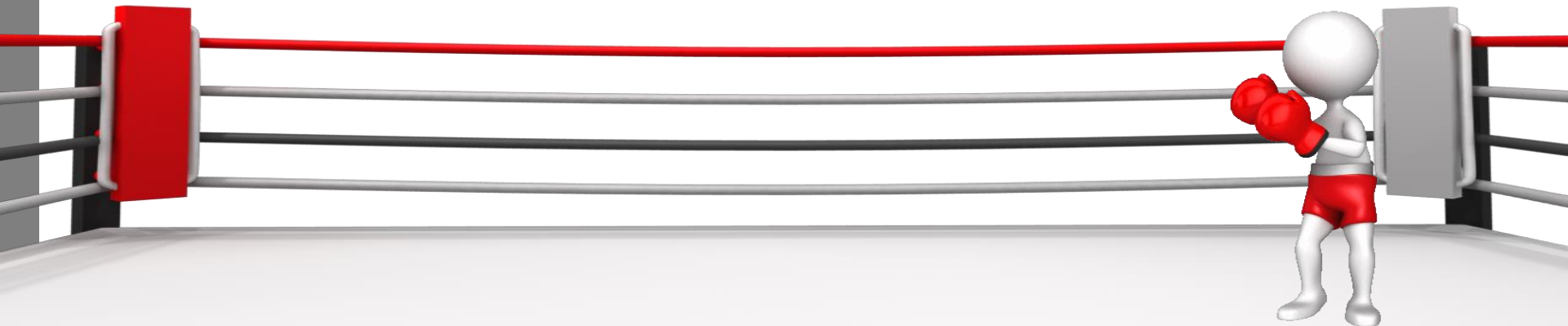Is this a ratio, rate, unit rate, or proportion?

In 2007, Joey Chestnut, reclaimed the mustard-yellow belt for America by eating 66 hot dogs in 12 minutes and defeating the reigning champ Takeru Kobayashi.

2)	On average, how many hot dogs did Joey Chestnut eat per minute?

In 2007, Joey Chestnut, reclaimed the mustard-yellow belt for America by eating 66 hot dogs in 12 minutes and defeating the reigning champ Takeru Kobayashi.
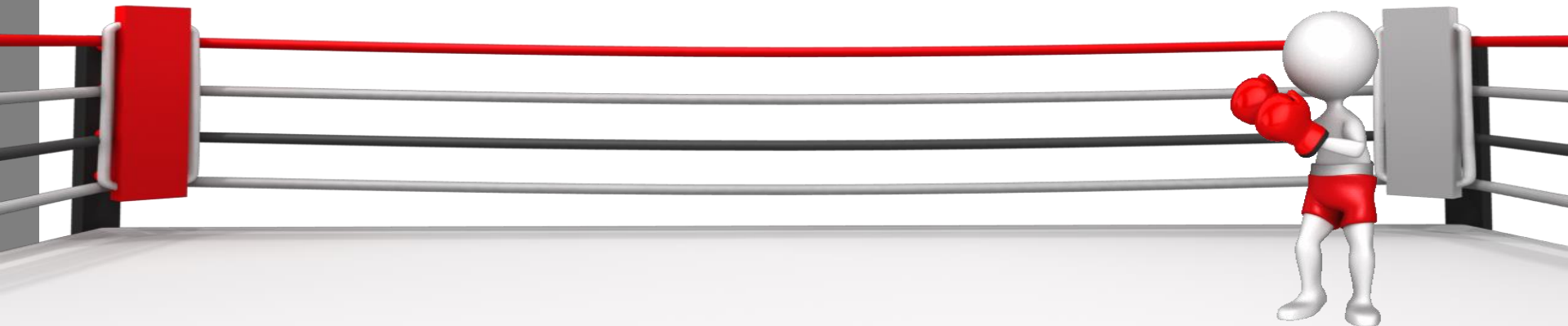
3)   If he could maintain this rate, how many hot dogs could he eat in one hour?

The Nutrition Facts for 66 hot dogs are shown below.

4) Determine the number of calories per hot dog.

Nutrition Facts

Nathan's Famous Hot Dogs

World Record Serving Size: 66.0 Hot Dogs (6,600 g)

Amount Per Serving

Calories 19,800 Calories from Fat 11,500

	% Daily Value
Total Fat 1,287 g	**1,965%**
Saturated Fat 490 g	**2,460%**
Trans Fat (NA)	
Cholesterol 2,250 mg	**750%**
Sodium 43,410 mg	**1,810%**
Total Carbohydrate 1,440 g	**480%**
Dietary Fiber 80 g	**330%**
Sugars 0 g	
Protein 675 g	**1,350%**
Vitamin A	0%
Vitamin C	4%
Calcium	325%
Iron	730%

Percentage values are based on a 2,000 calorie diet

CalorieLab.com/news

The Nutrition Facts for 66 hot dogs are shown below.

5) Determine the grams of fat per hot dog.

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