**Scientist: Per: Date:**

**Ratios**

 Ratios relate two quantities. We use ratios in our everyday lives. For example, 1 week contains 7 days. This ratio can be written in several ways:

|  |  |  |
| --- | --- | --- |
| $$1 week=7 days$$ | $$\frac{1 week}{7 days}$$ | $$\frac{7 days}{1 week}$$ |

An important type of ratio relates quantities within an object. For example, consider the human body. We can relate several quantities within the human body:

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{1 person}{2 legs}$$ | $$\frac{2 eyes}{10 fingers}$$ | $$\frac{2 ears}{2 knees}$$ | $$\frac{4 limbs}{1 body}$$ |

These are just a few examples. Write as many examples as you can for the spider:



Look around the room. Come up with 5 different ratios within the room.

Fill in the blanks:

\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ = \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ = \_\_\_\_\_\_

Write down the definition in your own words: What is a **Ratio**?

**Ratio:**

**Common Conversion Ratios**

**\*\*or use conversions page in notebook as reference**

1000 meters = 1 kilometer (Km)

5280 feet = 1 mile

12 inches = 1 foot

1 mile = 1.6 Km

1000 grams = 1 Kilogram (Kg)

1 pound = .4 Kilogram (Kg)

1 pound = 453 grams (g)

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

1 year = 365 days

1 gallon = 4 quarts

1 cup = 16 tablespoons

2 cups = 1 pint

1 quart = 2 pints

1 mile=1609 meters

1) 150 seconds is the same as how many minutes? *(Hint: First think…Is the final answer going to be* ***bigger****, or* ***smaller***

*than the original number?)*

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{150 seconds}{..}$$ | $$\frac{1 }{ }$$ | $$\frac{1 minutes }{ }$$ |  |

2) 5000 minutes is the same as how many hours? *(will the answer be bigger or smaller than original? )*

|  |  |  |
| --- | --- | --- |
| $$\frac{5000 minutes}{.}$$ | $$\frac{1 }{ }$$ | $$\frac{1 hours }{ }$$ |

3) 2 kilometers is the same as how many miles? *(will the answer be bigger or smaller than original?)*

|  |  |  |  |
| --- | --- | --- | --- |
| $$\frac{2 km}{..}$$ | $$\frac{1 }{ }$$ | $$\frac{1 miles }{ }$$ |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $$\frac{1 gallon}{..}$$ | $$\frac{1 }{ }$$ | $$\frac{1 }{ }$$ | $$\frac{ pints}{ }$$ |  |  |

4) 1 gallon is the same as how pints? *(will the answer be bigger or smaller than original?)*

5) 15 years is the same as how many days? *(will the answer be bigger or smaller than original?)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| $$\frac{15 meters}{second}$$ | $$\frac{1 }{ }$$ | $$\frac{1 }{ }$$ | $$\frac{ hours}{ }$$ |  |  |

6) How many tablespoons are in 3.5 pints ? *(will the answer be bigger or smaller than original?)*

7) 2 kilometers is the same as how many feet? *(will the answer be bigger or smaller than original?)*