**5.1b Rates and Unit Rates**

**EQ:** How do we use what we know about ratios to find RATES and UNIT RATES?

**RATE:** a ratio of two quantities with different units.

 **Types of RATES**: speed, cost, wages, growth

 ***Ex:*** $\frac{45 miles}{5 hours}$ , $\frac{\$5}{2.5 pounds}$ , $\frac{3.33 feet}{3 minutes}$

**UNITS:** A quantity used as a measurement.

***Ex:*** seconds, minutes, hours, days, weeks, months, years,

decades, dollars, pounds, inches, feet, yards…

**UNIT RATE:** a rate with a denominator of 1.

 ***Ex:*** $\frac{9 miles}{1 hour}$ , $\frac{\$2}{1 pound}$ , $\frac{1.11 feet}{1 minute}$

**HOW TO FIND A RATE:**

Write the quantities with different units in FRACTION FORM.

**Ex 1:** The car traveled 100 **miles** in 2 **hours**. What is the rate?

**The RATE is** $\frac{100 miles}{2 hours}$

**Ex 2:** You bike 30 **blocks** in 20 **minutes**. What is your rate?

**The RATE is** $\frac{30 blocks}{20 minutes}$

**HOW TO FIND UNIT RATES:**

Divide the amounts in the rate, top divided by bottom. Write the answer in FRACTION FORM with a **denominator of 1**.

**Ex 1:** If the car traveled 100 **miles** in 2 **hours**, how fast was the car going?

**50**

**The RATE is** $\frac{100 miles}{2 hours}$ **= 2 100 =** $\frac{50 miles}{1 hour}$

**Ex 2:** You bike 30 **blocks** in 20 **minutes**. What is your speed?

1.5

 **The RATE is** $\frac{30 blocks}{20 minutes}$ **= 20 30 =** $ \frac{1.5 blocks}{1 minute}$

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**RATE:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 ***Ex:*** $\frac{45 miles}{5 hours}$ , $\frac{\$5}{2.5 pounds}$ , $\frac{3.33 feet}{3 minutes}$

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***Ex:*** seconds, minutes, hours, days, weeks, months, years, decades, dollars, pounds, inches, feet, yards…

**UNIT RATE:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Ex:*** $\frac{9 miles}{1 hour}$ , $\frac{\$2}{1 pound}$ , $\frac{1.11 feet}{1 minute}$

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**IXL J.5 (7th) Practice as a CLASS**

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