Vocabulary

#1 Unit Rate – a ratio that is simplified so that it has a denominator of __one__.

#2 __simplify__

* make sure units are matched up

Guided Practice

Determine if each pair of ratios or rates is **equivalent**. Explain your reasoning.

1.) $24 saved after 3 weeks, $52 saved after 7 weeks.

$$\frac{\$24 \div 3}{3w \div 3} \boxed{\frac{\$8}{1w}} \qquad \frac{\$52 \div 7}{7w \div 7} \boxed{\frac{\$7.43}{1w}}$$

No, the unit rates are not the same.

2.) 270 calories in 3 servings; 450 calories in 5 servings.

$$\frac{270 \text{ cal} \div 3}{3 \text{ serv} \div 3} \boxed{\frac{90 \text{ cal}}{1 \text{ serv}}} \qquad \frac{450 \text{ cal} \div 5}{5 \text{ serv} \div 5} \boxed{\frac{90 \text{ cal}}{1 \text{ serv}}}$$

Yes, the unit rates are equal.

3.) Micah can do 75 push-up in 3 minutes. Eduardo can do 130 push-ups in 5 minutes. Are the rates **equivalent**?

$$\frac{75 p \div 3}{3 \min \div 3} \boxed{\frac{25 p}{1 \min}} \qquad \frac{130 p \div 5}{5 m \div 5} \boxed{\frac{26 p}{1 \min}}$$

NO, Eduardo can do one more pushup per minute.

4.) A human adult takes about 16 breaths in 60 seconds. A puppy takes about 8 breaths in 15 seconds. Are the rate equivalent? Explain your reasoning.

(SIMP.)

adult $\frac{16 \text{ b}}{60 \text{ sec}} = \boxed{\frac{8 \text{ b}}{30 \text{ sec}}}$ puppy $\boxed{\frac{8 \text{ b}}{15 \text{ sec}}}$

No, they don't simplify to the same ratio.

Building on the Essential Question – How can you determine if two ratios are **equivalent**?

simplify both ratios and compare them

Rate Yourself – Are you ready to move on?   YES   or   NO