

6th Grade
Dec 11, 2020

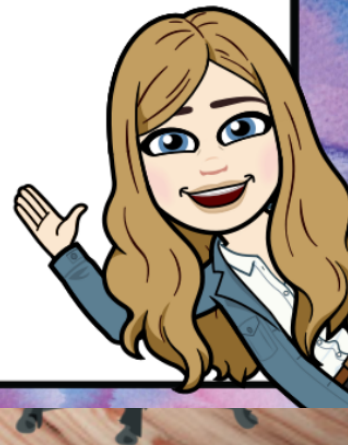
Turn in THQ if you did not yesterday.


See whiteboard for test makeups.

Today we will:
-review and complete video notes
-work on WS

HOMEWORK:

ALEKS 60 min and 5 topics due Dec 15




 Name _____
 VIDEO NOTES Unit ____ Lesson ____ Due Date ____

EQUVALENT RATIOS

Two ratios or rates are equal (or equivalent) when...

1. ...they create the same Unit rate ;

WE DO: 18 vocab words in 2 hours
 ✓ 27 vocab words in 3 hours

$$\frac{18}{2} \div \frac{2}{2} = \frac{9 \text{ words}}{1 \text{ hour}} \quad \frac{27}{3} \div \frac{3}{3} = \frac{9 \text{ words}}{1 \text{ hour}}$$

✓ yes, they are = ratios.

2. ...they create equivalent fractions ; OR

WE DO:
 20 out of 45 people go to a concert
 10 out of 20 people go to a movie

$$\frac{10}{20} \times \frac{2}{2} = \frac{20}{40} \neq \frac{20}{45}$$

3. ...they have equal cross products .

WE DO:

$$\frac{5 \text{ dogs}}{6 \text{ cats}} = \frac{7 \text{ dogs}}{8 \text{ cats}} \quad 5 \times 8 \stackrel{?}{=} 6 \times 7$$

$$40 \neq 42$$

MORE EXAMPLES

Lesson 6 Extra Practice: Equivalent Ratios

Determine if each pair of ratios or rates is equivalent.

WE DO:

\$16 for 2 tickets; \$40 for 5 tickets

$$\frac{\$16}{2} \div \frac{2}{2} = \frac{\$8}{1}$$

$$\frac{\$40}{5} \div \frac{5}{5} = \frac{\$8}{1}$$

✓ they are =.

8 out of 10 boys play a sport; 25 out of 30 boys play a sport

$$\frac{8}{10} \times \frac{3}{3} = \frac{24}{30} \neq \frac{25}{30}$$

X, they are not =.

5 minutes to read 9 pages; 50 minutes to read 30 pages

~~$$\frac{5}{9} = \frac{50}{30}$$~~

$$5 \times 30 \stackrel{?}{=} 9 \times 50$$

$$150 \neq 450$$

X, they are not =.

YOU DO: (You may choose which of the 3 ways)

3 teachers for 63 students; 7 teachers for 147 students

~~$$\frac{3}{63} = \frac{7}{147}$$~~

$$7 \times 63 = 441$$

$$147 \times 3 = 441$$

✓ yes they are equal ratios!
26?

Lusita earned \$85 for 8 hours of babysitting. Avery earned \$125 for 11 hours of babysitting. Are the rates equivalent? Explain your reasoning.

~~$$\frac{\$85}{8} = \frac{\$125}{11}$$~~

$$125 \times 8 = 1,000$$

$$85 \times 11 = 935$$

X, they are not =

Miss Ferguson recorded 17 absences in her class during the first 30 days of school. During the last 60 days of school, she recorded 42 absences. Are the rates equivalent? Explain your reasoning.

$$\frac{17}{30} \stackrel{?}{=} \frac{42}{60}$$

$$\frac{17}{34} \times 2$$

$$\frac{17}{30} \times \frac{2}{2} = \frac{34}{60}$$

X No, there are not =

Lesson 6 Skills Practice

Equivalent Ratios

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

1. \$18 for 3 bracelets; \$30 for 5 bracelets

~~$\frac{18}{3} = \frac{30}{5}$~~
 $18 \times 5 = 90$
 $30 \times 3 = 90$
 $\frac{18}{3} \times \frac{5}{5} = \frac{90}{15}$
 $\frac{30}{3} = \frac{10}{1}$
 Yes

2. 120 Calories in 2 servings; 360 Calories in 6 servings

~~$\frac{120}{2} = \frac{360}{6}$~~
 $360 \times 2 = 720$
 $120 \times 6 = 720$
 $\frac{120}{2} \times \frac{6}{6} = \frac{720}{12}$
 $\frac{360}{2} = \frac{180}{1}$
 Yes

3. 4 hours worked for \$12; 7 hours worked for \$28

4. 15 blank CDs for \$5; 45 blank CDs for \$15

5. 24 points scored in 4 games; 48 points scored in 10 games

6. 15 out of 20 students own hand-held games; 105 out of 160 students own hand-held games.

7. 30 minutes to jog 3 miles; 50 minutes to jog 5 miles

8. \$3 for 6 muffins; \$9 for 18 muffins

9. 360 miles driven on 12 gallons of fuel; 270 miles driven on 9 gallons of fuel

10. **SHOPPING** Miguel bought 2 pairs of jeans for \$50, and Han bought 4 pairs of jeans for \$90. Did they pay the same rate? Explain your reasoning.

