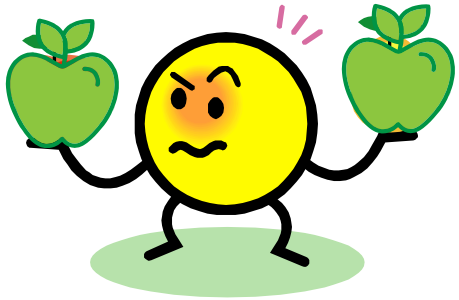
5.2

Proportions

Review - Ratios



- A ratio is the comparison of two quantities with the same unit.
- A ratio can be written in three ways:
  - As a quotient (fraction in simplest form)
  - As two numbers separated by a colon (:)
  - As two numbers separated by the word “to”

Review - Ratios

Write the ratio of 25 miles to 40 miles in simplest form.

Which is equivalent to the ratio of 1 soccer ball to 3 basketball?

A 

B 

C 

D 

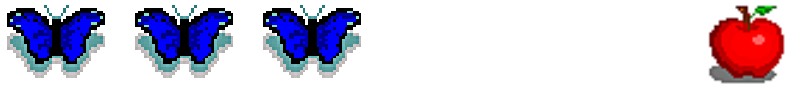
E 

Which ratio shows the ratio of 3 butterflies to 1 apple?

A 

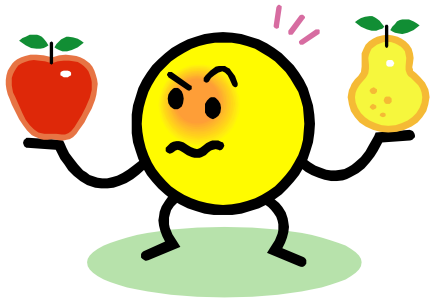
B 

C 

D 

E 

Review - Rates

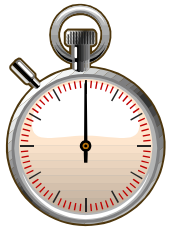


* A rate is the comparison of two quantities with different units.

* A rate is written as a quotient (fraction) in simplest form.

* Note: rates have units.

Write the rate of 25 yards to 30 seconds in simplest form.



Methods to check if proportional

$$\frac{6}{8} \textit{ and } \frac{12}{16}$$

Multiply a number to numerator and denominator one ratio to make it equal to the other one	
Simplify both ratios to simplest form	
Convert each into decimals	

Methods to check if proportional

$$\frac{6}{8} \textit{ and } \frac{12}{16}$$

Cross-Multiply. The cross-products should be equal to each other.	

Practice

Tell whether the following are proportional. Indicate how you figured it out.

1. $\frac{1}{2}, \frac{5}{10}$

2. $\frac{4}{6}, \frac{18}{24}$

Practice

Tell whether the following are proportional. Indicate how you figured it out.

3. $\frac{10}{3}, \frac{5}{6}$

4. $\frac{25}{20}, \frac{15}{12}$

Practice

Tell whether the following are proportional. Indicate how you figured it out.

5) 7 inches in 9 hours; 42 inches in 54 hours

6) 12 players from 21 teams; 15 players from 24 teams

Practice

7) **You swim your first 4 laps in 2.4 minutes. You complete 16 laps in 12 minutes. Is the number of laps proportional to your time?**