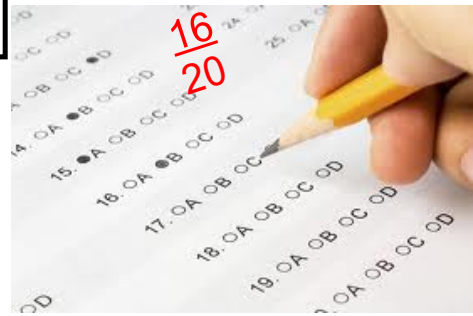


Ratio: a comparison between two numbers with the **same units**

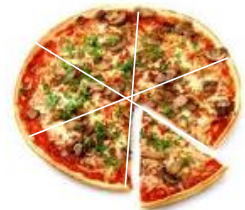
- can be written 2:5 or $\frac{2}{5}$
- fraction is popular for calculations
- fraction form is also called a proportion
- ex: mixing oil 50:1



Rate: a comparison between two numbers with **different units**

- ex: km/h; \$/hr; \$/100 g; words/min
- also known as a rate of change

Proportion: a fractional statement of equality between two ratios or rates



$$\frac{3}{6} = \frac{1}{2}$$

Example #4...

Recipe #1
3 cups of concentrate
7 cups of water

Recipe #2
2 cups of concentrate
5 cups of water

$\frac{3}{10} = 30\% \text{ conc}$
 $\frac{7}{10} = 70\% \text{ H}_2\text{O}$

10 total

You only want to make 8 cups of Recipe #1. How many cups of concentrate and how many cups of water will you need? Explain your solution.

...Hint...How many cups does the recipe make in total??



$30\% \text{ of } 8$ $70\% \text{ of } 8$
 0.30×8 0.70×8
 2.4 cups conc $\rightarrow 5.6 \text{ cups H}_2\text{O}$



DISCUSS THE IDEAS

SIDNEY CROSBY, HOCKEY PLAYER

At the 2010 Olympic Winter Games in Vancouver, British Columbia, Sidney Crosby of Cole Harbour, Nova Scotia, scored the gold medal-winning goal in men's hockey. Team Canada, which had been playing at a furious pace against the United States, won the game with a score of 3 to 2.

In the 2001–2002 season, when Crosby was playing for the Dartmouth Subways, he scored 95 goals and earned 193 points in 74 games. How would you calculate the average number of points he earned per game?

calculate???

Sidney's average points scored is a rate comparing his points scored to games played. Students could discuss how the number of points scored per game can vary significantly with each game, due to scoring streaks or injuries. Thus, an average rate may not always be the best indicator of an athlete's ability.

The solution is as follows.

$$\frac{193 \text{ points}}{74 \text{ games}} \approx 2.6 \text{ points/game}$$



Unit Price



Unit Price

The cost of one unit; a rate expressed as a fraction in which the denominator is 1.

*** allows you to compare prices and determine the 'best buy'

EX: Five MVHS T-shirts cost \$40. The unit price is :

$$\frac{\$40.00}{5} = \$8.00 / \text{shirt}$$



Unit Rate

The rate or cost for one item or unit.

EX: Lay's chips can produce 25 000 bags of chips in a regular 8 hour shift. The unit rate is:

$$\frac{25\,000}{8} = 3125 \text{ bags/hour}$$

Exampe #1:

Shoppers has a sale on Sunday where you can buy six 710 mL of pop for ~~\$1.99~~. Calculate the unit price of 1 pop.

\$2.49



$$\frac{\$2.49}{6} = \$0.41 \text{ / bottle}$$

Example 2:

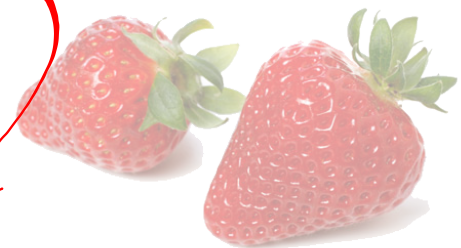
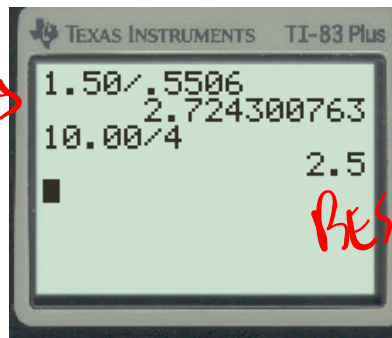
$\$/L$

Shortcake picks fresh strawberries at a U-pick farm in Derby. If she fills a pint basket (0.5506 litres), it cost her \$1.50. If she fills a 4-litre ice cream pail, it will cost \$10.00.

Which size of container will give her a better buy?



Pint vs 4L



COMPARISON SHOPPING...

- let's go online and check out their site / sales flyer!!!

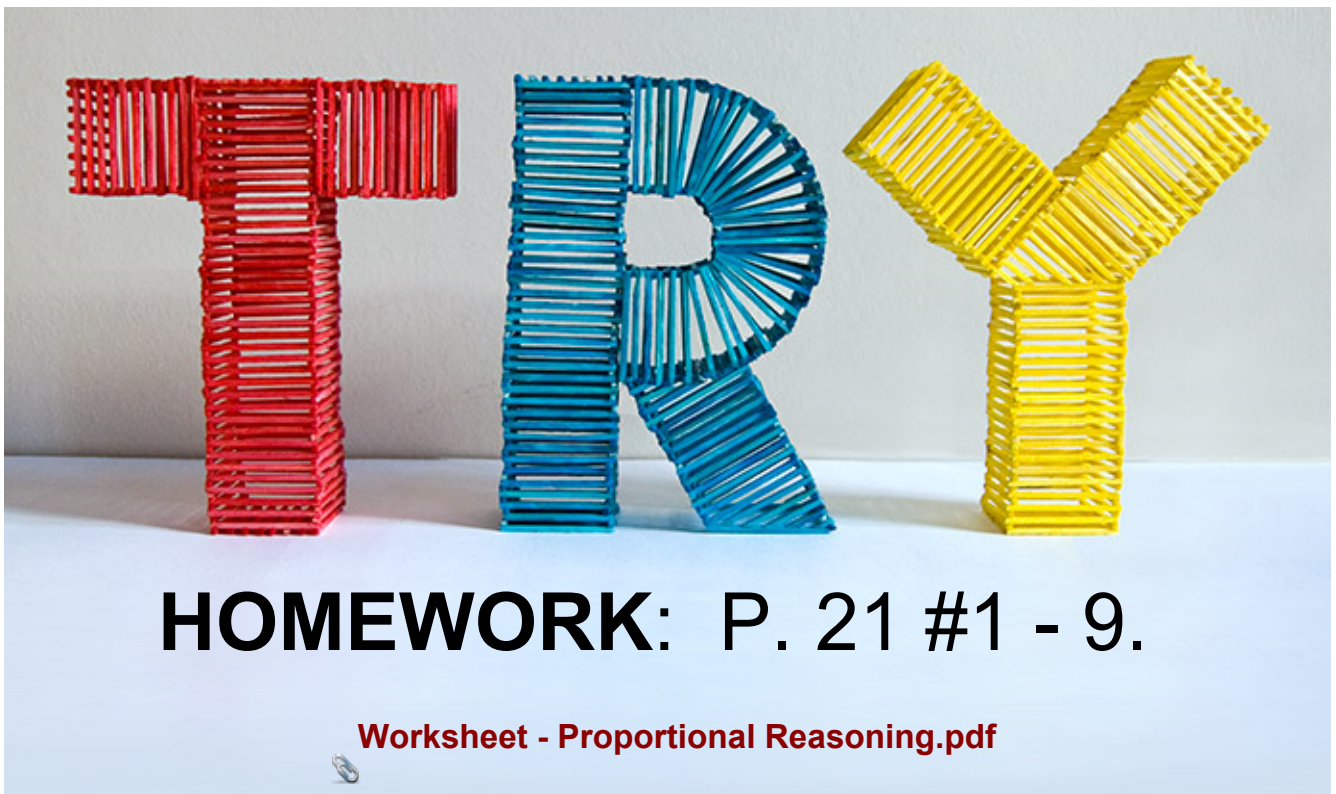
Foodland VS Super Value VS Sobey's VS Shoppers VS Giant Tiger

Turkey
Bucks
\$50/50

↓
Thurs → Sat

↓
1 day
Sat/Sun
eggs

*
clothes



HOMEWORK: P. 21 #1 - 9.

[Worksheet - Proportional Reasoning.pdf](#)

[1.1 Build Your Skills Detailed Solutions.pdf](#)

Attachments

1.1 Build Your Skills Detailed Solutions.pdf

Worksheet - Proportional Reasoning.pdf