

Curriculum Outcome

General Outcome: Develop number sense and critical thinking skills.

N1 Solve problems that involve unit pricing and currency exchange, using proportional reasoning.

N2 Demonstrate an understanding of income, including: wages, salary, contracts, commission, piecework, and calculating gross pay and net pay.

N3 Demonstrate an understanding of compound interest.

N4 Demonstrate an understanding of financial institution services used to access and manage finances.

N5 Demonstrate an understanding of credit options, including: credit cards, and loans.

Student Friendly:

Warmup: 10 minutes

Questions 3, 4 5, 9, 10 and 11.

3. $\frac{2^R}{x} = \frac{2^R}{500}$ $\frac{3^R}{x} = \frac{3^R}{750}$

$x = 1500 \text{ ml}$ $x = 500 \text{ mL}$

$$2) \begin{array}{l} 30:10 \\ 3:1 \end{array} -$$

$$3) 24:9$$

$$4) \begin{array}{l} 2 \text{ Flour} \\ 1 \text{ Shortening} \\ \hline 3 \text{ total} \end{array}$$

$$\frac{2}{3} = \frac{x}{30}$$

$$x = 20$$

20 cups of flour

$30 - 20 = 10$ cups of shortening

$$\begin{array}{r} 10 \text{ Comp A} \quad 3 \\ \text{Total}^B \quad \frac{10}{13} \end{array}$$

$$\frac{3}{13} = \frac{A}{45}$$

$$A = \frac{3 \times 45}{13}$$

$$A = 10.4L$$

$$B = 45 - 10.4 = 34.6L$$

$$\frac{10}{13} = \frac{B}{45}$$

$$\begin{array}{r} 11 \\ 5P \\ 3Th \\ \hline 8 \text{ Total} \end{array}$$

$$\frac{5}{8} = \frac{P}{24}$$

$$\frac{5}{8} = \frac{P}{24}$$

$$P = 15L$$

$$24 - 15 = 9L \text{ Th.}$$

Warm up!!!

1.

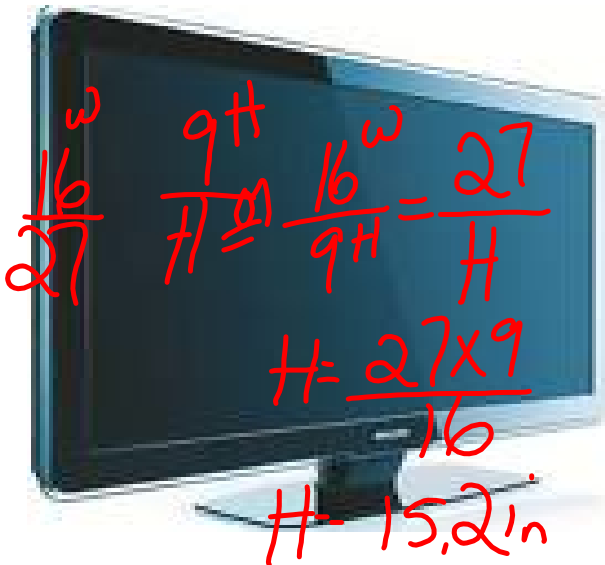


Many big screen TV's have an aspect ratio of 16:9. This means that for every 16 inches of width, the TV will be 9 inches high. Calculate the height of a TV that is 27 inches wide.

$$\frac{W}{H} = \frac{16}{9} = \frac{27}{x}$$

$$16(x) = 9(27)$$

$$x = 15.2$$



$\frac{\text{width}}{\text{height}}$

$x = \text{height}$

1.

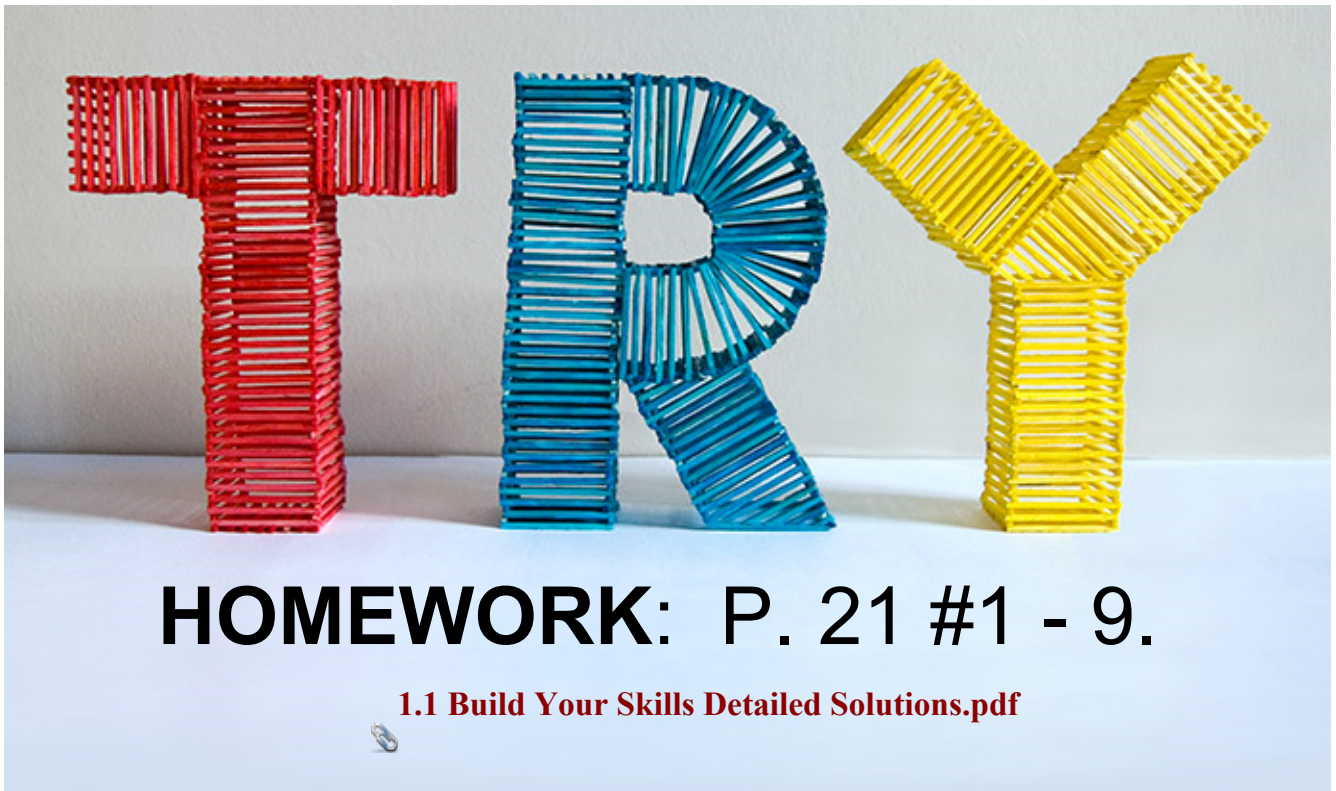
Many big screen TV's have an aspect ratio of 16:9. This means that for every 16 inches of width, the TV will be 9 inches high. Calculate the height of a TV that is 27 inches wide.

$$\frac{16}{9} = \frac{27}{x}$$

$$16x = 243$$

$$x = 15.1875$$

The height of the TV would be 15.2 inches.



$$1) 4:1 \quad \frac{4}{1} \quad 4 \text{ to } 1$$

$$2) 36 \text{ min}$$

$$3) \text{ i) } 75 \text{ min} \quad \text{ii) } 7.5 \text{ min}$$

$$4) \text{ i) } 13 \quad \text{ii) } 13:36$$

$$5) 121 .$$

$$6) \$637.50 \text{ for } 50 \text{ dvd}$$

$$900 \text{ dvds for } \$11\,475.00$$

$$7) \frac{25 \text{ kg}}{\$75} \quad \text{and} \quad \frac{20 \text{ kg}}{\$60}$$

$$8) \quad \begin{array}{l} \text{red: oak} \\ 6.86\text{L} \quad 5.14\text{L} \end{array}$$

$$9) \quad \frac{6 \text{ min}}{30 \text{ km}} = \frac{x}{40074}$$

$$x = 8014.8 \text{ min} \div 60 = \underline{\quad} \text{ h}$$

$$\div 24 = 5.57 \text{ days}$$

P. 273

1. a) $n=5$
 c) $n=136$
 e) $n=35$

2. 10

3. 225

4. Aaron = 48
 Mario = 24

5. 66 cm

b) 192

$$3 \begin{matrix} G & S \\ 2 & : & 9 \end{matrix}$$

$$\frac{2^G}{9^S} = \frac{50^G}{\lambda}$$

$$\frac{P}{22m} = \frac{A}{180cm}$$

$$\frac{60mm}{22m} = \frac{180cm}{\lambda}$$

$$\begin{array}{r} A : 4 : M \\ 4 : 3 : 2 \\ \left. \begin{array}{l} \downarrow \times 12 \\ \downarrow \times 12 \\ \downarrow \times 12 \end{array} \right\} \\ 48 : 36 : 24 \end{array}$$

$$\begin{array}{ccc} M & : & D \\ \begin{array}{l} \color{red}{60 \text{ mm}} \\ \color{green}{180 \text{ cm}} \end{array} & & \begin{array}{l} \color{red}{22 \text{ mm}} \\ \color{green}{x \text{ cm}} \end{array} \\ \color{blue}{x3} \left\{ \begin{array}{l} \color{red}{60 \text{ mm}} \\ \color{green}{180 \text{ cm}} \end{array} \right. & & \left. \begin{array}{l} \color{red}{22 \text{ mm}} \\ \color{green}{x \text{ cm}} \end{array} \right\} \color{blue}{x3} \\ & & \color{blue}{\hookrightarrow 66 \text{ cm}} \end{array}$$



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 :

$$\frac{\$40.00}{5} = \frac{\$8.00}{1}$$



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:

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

Example #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.



$$\begin{array}{r} 1.99 \\ \hline 6 \\ \$0.33 \end{array} / 1 \text{ pop}$$

Example 2:

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?



$$\begin{array}{r}
 \$ 1.50 \\
 \hline
 0.5506L \\
 \hline
 \$ 2.72/L
 \end{array}$$

$$\begin{array}{r}
 \$ 10 \\
 \hline
 4L \\
 \hline
 \$ 2.50/L
 \end{array}$$

COMPARISON SHOPPING...

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

Super Valu VS Sobeys VS Costco

 <http://calgary.ctvnews.ca/ctv-grocery-price-comparison-for-november-1.1550350>

HAMPTON FARMS
Hot Nuts
Arachides Épicées
SPICY PEANUTS
Product of U.S.A.
Peanut Net Wt. 283g (10 oz)

HAMPTON FARMS
Hickory Smoked
PEANUTS IN THE SHELL
Product of U.S.A.
Peanut Net Wt. 283g (10 oz)

2/\$3
or \$1.50 ea

Hampton Farms
peanuts in the shell
hot nut or hickory smoked,
product of U.S.A., 283 g

1.67 Super Value

		
4.99	4.99	4.49
PC® Baby King oyster mushrooms product of Canada 200 g	PC® King Oyster sliced mushrooms product of Canada 200 g	PC® portobello mushroom caps product of Canada pkg. of 4

PRODUCE



plus **300 pts**

<p>4.99</p> <p>PC® Baby King oyster mushrooms product of Canada 200 g</p>	<p>4.99</p> <p>PC® King Oyster sliced mushrooms product of Canada 200 g</p>	<p>4.49</p> <p>PC® portobello mushroom caps product of Canada pkg. of 4</p>
<p>PRODUCE</p> 		

<p>179 lb 3.95/kg</p> <p>Bartlett or Bosc pears product of U.S.A., extra fancy grade</p>	<p>large vegetable 1.75 kg or fruit platter with dip 1.85 kg - prepared fresh in-store daily may not be available at all locations</p> <p>1199-1499 each</p>	<p>169 lb 3.73/kg</p> <p>sweet potatoes product of U.S.A., no. 1 grade</p>	<p>59¢ lb 1.30/kg</p> <p>green cabbage product of Atlantic Canada, Canada no. 1 grade</p>
	<p>plus 350 .pts</p> <p>greenhouses TOMATOES TOMATOES</p> 	<p>plus 200 .pts</p> <p>COCKTAIL CHERRY DENISES GRAPE RAISINS</p> 	
<p>2/\$5 or \$2.50 ea</p> <p>large broccoli product of U.S.A., bunch</p>	<p>349</p> <p>tomatoes product of Canada or Mexico, no. 1 grade, pkg. of 4</p>	<p>2/\$6 or \$3 ea</p> <p>PC® Grape, Cherry or Cocktail tomatoes product of Mexico or Canada, no. 1 grade 255-340 g</p>	<p>499</p> <p>Farmer's Market™ English cucumbers product of Mexico, no. 1 grade, pkg. of 3</p>

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plus 200 pts

5/\$4 Cesar dog food selected varieties 100 g or 80c ea.

3/\$5 Whiskas Temptations cat treats selected varieties 60-85 g or \$1.67 ea.

Striploin Grilling Steak
super saver size
cut from canada AA
15.41/kg **6⁹⁹** /lb

Broccoli
product of usa, wrapped
size 18's **SAVE UP TO 99¢ EA**
2/3⁰⁰

Compliments Baby-Cut Carrots
product of usa or mexico, size 30's or
Compliments Baby-Cut Carrots
product of nova scotia, 340 g

Equates to 10¢ /bottle

Big 8 Spring Water
24 x 500 ml **SAVE UP TO 1⁵⁹**
2⁴⁰ each

Old Dutch RESTAURANTE ORIGINAL TRIANGLES

Old Dutch Chip-L Chips Croust

Sensations by Compliments Shredded Cheese
or compliments balance 340 g

Ready to Eat Avocados
product of mexico

Old Dutch RESTAURANTE SALSA

Don't Forget Your Drinks!

Pepsi
selected varieties 6 x 710 ml **SAVE UP TO 2⁰⁰**
3/9⁹⁹

Old Dutch Restaurante Tortilla Chips
230 - 320 g, salsa, queso dip 400 - 430 ml, ato or rlp-l chips 270 g **SAVE UP TO 79¢ EA**
2/6⁰⁰

EVERY DAY
2/3⁰⁰

SAVE UP TO 2⁰⁰
4⁹⁹ each



Miramichi Meat: Same type of roast 2.5 kg costs \$22.48. Which one is cheaper?

$\frac{\$22.48}{2.5}$
 $\$8.99 / \text{kg}$
 $\$8.99 / 100\text{g}$



HOMEWORK...

P. 26: Questions #1-7

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

BUILD YOUR SKILLS

1. Vikram purchases 12 sinks for his plumbing business at a wholesale price of \$1053.00. He wants to sell each sink to a different customer. What is the unit price of one sink?
2. A horticulture technician buys lawn fertilizer for several customers. She finds the following prices: 7 kg for \$19.99; 14 kg for \$35.95; 21 kg for \$50.99. Which package has the lowest unit cost?
3. A locksmith in Campbellton, New Brunswick, is buying locks for a new apartment building. One supplier sells locks at \$120.00 for four. Another supplier sells six for \$192.00. Which supplier has the lower cost for one lock? What other factors might you consider when selecting a lock?



4. Joel is a salesperson in a department store that sells T-shirts individually and in packages of two or three. One T-shirt sells for \$9.98, a package of two sells for \$15.49, and a package of three sells for \$22.99.

- Find the unit price when T-shirts are sold in a package of two. How much is the unit price in a package of three?
- Suppose a customer wants to buy seven T-shirts. Which combination of packages will be the least expensive?

5. The meat department at a large supermarket sells boneless steaks at the following prices:

- \$7.50 for 500 g;
- \$12.50 for 1 kg; and
- \$19.50 for 1.5 kg.

- Which of these packages has the lowest unit price?
- If a customer needs 2.5 kg, which combination of packages should he or she buy to get the best price but not have leftover meat?

6. A different store sells boneless steaks for the following prices:

- \$4.25 for 250 g;
- \$7.95 for 500 g; and
- \$29.50 for 2 kg.

Which of these packages has the lowest unit price? How do these prices compare to those in question 5?



Many people shop around to find a good deal on meat before they buy it.

Extend your thinking

... in northern New Brunswick is buying

FERTILIZERS

- \$4.25 for 250 g;
- \$7.95 for 500 g; and
- \$29.50 for 2 kg.

Which of these packages has the lowest unit price? How do these prices compare to those in question 5?

Extend your thinking

7. A potash mining company in northern New Brunswick is buying industrial first-aid kits in bulk. First-aid kits are available in three sizes.
- A small kit costs \$42.50 and contains enough supplies to meet the needs of 1–9 workers.
 - A medium-sized kit costs \$58.25 and will serve 10–40 workers.
 - A large kit costs \$70.50 and will serve 41–75 workers.

Jason, the buyer, needs to buy kits for 250 workers. Which combination of kits will be the least expensive? What will the total cost be before taxes?



Canada is the world's largest potash producer. Potash is used to make fertilizers.

Attachments

1.2 Build Your Skills Detailed Solutions.pdf

1.3 Build Your Skills Detailed Solutions.pdf

1.1 Build Your Skills Detailed Solutions.pdf