Yogurt

T1

A food company produces yogurt in half-cup tubs.

2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1. The tubs of yogurt are sold for 75¢ each.

   Twenty percent of this is profit for the food company.

   How much profit does the company make on each tub? 15¢

   Show your work. 0.2×0.75
   0.15

The machine that fills the half-cup tubs with yogurt runs 10 hours a day for 5 days a week. It fills 1600 tubs an hour.

2. How many gallons of yogurt are needed to fill 1600 tubs? 50 gallons

   Show your calculations.
   16 cups = 1 gal
   32 tubs = 1 gal
   $\frac{32 \text{ tubs}}{1 \text{ gal}} = \frac{1600 \text{ tubs}}{x \text{ gal}}$ → $32x = 1600$, $x = 50$

3. How many gallons of yogurt are needed each week? 2,500 gal.

   Show your work. 16,000 tubs a day
   80,000 tubs a week
   $\frac{32 \text{ tubs}}{1 \text{ gal}} \quad \frac{80{,}000 \text{ tubs}}{x \text{ gal}}$
   $32x = 80{,}000$
   $x = 2{,}500$

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40%

   Show how you figured it out. 2 extra days
   $\frac{2}{5} = 0.4$
   $= 40\%$

Yogurt

T2

A food company produces yogurt in half-cup tubs. 16 cups = 8 pints = 4 quarts = 1 gallon

2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1. The tubs of yogurt are sold for 75¢ each.

   Twenty percent of this is profit for the food company.

   How much profit does the company make on each tub?

   Show your work.

   60¢

   $\frac{15}{100} \times \frac{80}{100}$

   $3\ \frac{75}{100} \times \frac{80}{100} = 1\frac{5}{5}$

The machine that fills the half-cup tubs with yogurt runs 10 hours a day for 5 days a week. It fills 1600 tubs an hour.

2. How many gallons of yogurt are needed to fill 1600 tubs?

   Show your calculations.

   50 gallons

   $800 \div 16 = 50$

3. How many gallons of yogurt are needed each week?

   Show your work.

   2500 gallons

   $50 \times 10 \times 5 = 2500$

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week?

   Show how you figured it out.

   40%

   $50 \times 10 \times 7 = 3500$

   $3500 - 2500 = 1000$

   $\frac{1000}{2500} = \frac{2}{5}$

Yogurt

T3

A food company produces yogurt in half-cup tubs.

2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1. The tubs of yogurt are sold for 75¢ each.

   Twenty percent of this is profit for the food company.

   How much profit does the company make on each tub? 15¢

   Show your work. 0.5 cup / 75¢

   $20\%(75¢) = P$

   $0.2(0.75) = 0.15$

   $P = 15¢$

The machine that fills the half-cup tubs with yogurt runs 10 hours a day for 5 days a week. It fills 1600 tubs an hour.

2. How many gallons of yogurt are needed to fill 1600 tubs? 50 gallons

   Show your calculations. $1600 \text{ tubs} \cdot \frac{0.5 \text{ cup}}{1 \text{ tub}} = 800 \text{ cups}$

   $800 \text{ cups} \cdot \frac{1 \text{ pint}}{2 \text{ cups}} \cdot \frac{1 \text{ gal}}{8 \text{ pints}} = \frac{800}{16} = 50 \text{ gal}$

3. How many gallons of yogurt are needed each week? 2500 gallons

   Show your work. $\frac{1600 \text{ tubs}}{1 \text{ hour}} \cdot \frac{10 \text{ hours}}{1 \text{ day}} = \frac{16000 \text{ tubs}}{1 \text{ day}}$

   $\frac{16000 \text{ tubs}}{1 \text{ day}} \cdot \frac{5 \text{ days}}{1} = 80000 \text{ tubs filled in 5 days}$

   $\frac{50 \text{ gal}}{1600 \text{ tubs}} \cdot \frac{80000 \text{ tubs}}{1} = 2500 \text{ gal}$

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40%

   Show how you figured it out.

   $\frac{16000 \text{ tubs}}{1 \text{ day}} \cdot \frac{7 \text{ days}}{1} = 112000 \text{ tubs filled in 7 days}$

   $112000 - 80000 = 32000$

   $\frac{32000}{80000} = 0.4 = 40\%$

Yogurt

T4

A food company produces yogurt in half-cup tubs.

2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1. The tubs of yogurt are sold for 75¢ each.

   Twenty percent of this is profit for the food company.

   How much profit does the company make on each tub? .15

   Show your work. $.75 \cdot .20 = .15$

The machine that fills the half-cup tubs with yogurt runs 10 hours a day for 5 days a week. It fills 1600 tubs an hour.

2. How many gallons of yogurt are needed to fill 1600 tubs? 50 gallons

   Show your calculations. $2/.5 = 4 \cdot 2 = 8 \cdot 4 = 32$

   $1/2$

   $32 \overline{)1600}$ 50

3. How many gallons of yogurt are needed each week? 2500

   Show your work.

   $50 \cdot 10 = 500 \cdot 5 = 2500$

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40%

   Show how you figured it out.

   $1000 = 2500 - 3500$

   $= 40\%$

Yogurt

T5

A food company produces yogurt in half-cup tubs.

2 cups = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

1. The tubs of yogurt are sold for 75¢ each.

   Twenty percent of this is profit for the food company.

   How much profit does the company make on each tub? 15¢

   Show your work.

   1 tub = ½ cup

   0.75
   × 0.2
   150
   000
   0.150 15¢

The machine that fills the half-cup tubs with yogurt runs 10 hours a day for 5 days a week. It fills 1600 tubs an hour.

2. How many gallons of yogurt are needed to fill 1600 tubs? 50 gallons

   Show your calculations. 1600 tubs = 800 cups = 400 pints = 200 quarts = 50 gallons

3. How many gallons of yogurt are needed each week? 2500 gallons

   Show your work. 50 gal = hr. 50 hrs a week

   2500 gallons

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 50 gal = hr. 70 hrs a week 40% increase

   Show how you figured it out.

   5 days = 2500 gal 7 days = 3500 gal
   difference = 1,000 gal

   $\frac{1000}{2500} = \frac{x}{100}$

   $100{,}000 = 2{,}500x$

   $1000 = 25x$

   $40 = x$