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¢ ✓ 1

   Show your work. 0.2×0.75
   0.15 ✓ 1

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 ✓ 1

   Show your calculations.

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

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

   Show your work. 16,000 tubs a day
   80,000 tubs a week 1

   $\frac{32 \text{ tubs}}{1 \text{ gal}} = \frac{80{,}000 \text{ tubs}}{x \text{ gal}}$ ✓
   $32x = 80{,}000$
   $x = 2{,}500$

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40% ✓ 2

   Show how you figured it out. 2 extra days
   $\frac{2}{5} = 0.4$
   $= 40\%$ ✓ 1

(10)

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?

   60¢ X 0

   Show your work.

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

   $3\frac{25}{100} \times \frac{2}{100}\frac{80}{1}\frac{1}{25}$ X 0

   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? 50 ✓ gallons 1

   Show your calculations.

   800 ÷ 16 = 50 ✓ 1

   2

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

   Show your work.

   50 X 10 X 5 = 2500 ✓ 1

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40% ✓ 2

   Show how you figured it out.

   50 X 10 X 7 = 3500 1

   3500 − 2500 = 1000

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

CCR 4

(8)

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¢ ✓ 1

   Show your work. 0.5 cup / 75¢

   $20\%(75¢) = p$

   $0.2(0.75) = 0.15$ ✓ 1

   $p = 15¢$

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 ✓ 1

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

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

3. How many gallons of yogurt are needed each week? 2500 gallons ✓ 2

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

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

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

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40% ✓ 2

   Show how you figured it out.

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

   $112000 - 80000 = 32000$

   $\frac{32000}{80000} = 0.4 = 40\%$ ✓ 1

(10)

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?

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

   .15 ✓ 1

   1

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.

1

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

   Show your calculations. $\frac{1}{2}$ $2/.5 = 4 \cdot 2 = 8 \cdot 4 = 32$

   $32\overline{)1600}$ 50

   50 gallons ✓

   ✓ 1

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

   Show your work. $50 \cdot 10 = 500 \cdot 5 = 2500$ ✓

   2500 ✓ 2

   1

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.

   $1000 = 2500 - 3500$

   $= 40\%$

   40% ✓ 2

   1 0

CCR 4

9

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¢ ✓ 1

   Show your work.

   1 tub = ½ cup

   0.75
   × 0.2
   150
   000
   0.150 15¢ ✓ 1

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 ✓ 1

   Show your calculations. 1600 tubs = 800 cups = 400 pints = 200 quarts = 50 gallons ✓ 1

3. How many gallons of yogurt are needed each week? 2500 gallons ✓ 2

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

   2500 gallons ✓ 1

4. What is the percent increase in production if the machine runs for 7 days a week instead of 5 days a week? 40% increase ✓ 2

   Show how you figured it out.

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

   $\frac{1000}{2500} = \frac{x}{100}$ ✓ 1

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

   $1000 = 25x$

   $40 = x$

CCR 4

10