

STUDENT MATERIALS

PART 1 – FAVORITE CLASS PERIOD

In the cafeteria, there is space for one student along each side of hexagon-shaped tables. Write an equation to represent the number of tables, t , used when there are 264 students that eat in the cafeteria.

Equation: $6t = 264$

Work: $264 \div 6 = 44$

Solution: $t = 44$

2. The school is planning to update the furniture in the cafeteria with a grant; they have \$60,000 to spend. To purchase hexagon-shaped tables it would cost \$1,165 each. There is an option to purchase octagon-shaped tables at \$1,641 each. Create an equation to model the price to purchase t tables of each table shape and stay within the grant budget.

Hexagon-shaped table

Equation: $1,165t \leq 60,000$

Work: $\frac{60,000}{1,165} = 51$

Solution: 51 tables
 $t = 51$

Octagon-shaped table

Equation: $1,641t = 60,000$

Work: $\frac{60,000}{1,641} = 35$

Solution: 35 tables
 $t = 35$

3. Based on your work above, which shape table should the school purchase? How many more seats would there be for students if the maximum number of students each table would hold is purchased?

The school should purchase the hexagon shaped tables, there would be 16 more seats.

51
 $\underline{35} = 16$

4. Upon entering the cafeteria, Gus sees that his friends are at his usual lunch table and 5 seats are available. There are 12 seats for each lunch table in the cafeteria. Write an equation to model this situation and then show your work to solve for the number of Gus's friends already at the table.

Equation: $5 + f = 12$

Work: $\begin{array}{r} -5 \\ 5 + f = 12 \\ \hline f = 7 \end{array}$

Number of Friends: 7

5. Moriah buys 6 cookies in the à la carte line at lunch. When she gets back to her table, she finds that her friends also purchased cookies and now they have 15 chocolate chip cookies total. Write an equation to model this situation and then show your work to solve for the number of cookies Moriah's friends purchased.

Equation: $6 + x = 15$

Work: $\begin{array}{r} -6 \\ 6 + x = 15 \\ \hline x = 9 \end{array}$

Number of cookies: 9 cookies

6. Lucas has a 30-minute lunch period each day. After the first 10 minutes, students can choose to go outside or play in the gym for the remaining time. Lucas decides to go outside after he finishes his lunch. Write and solve an equation how much time Lucas had outside if it took him 18 minutes to eat his lunch. Show your work.

Equation: $x + 18 = 30$

Work:
$$\begin{array}{r} x + 18 = 30 \\ -18 \quad -18 \\ \hline 12 \end{array}$$

Time for recess: 12 minutes

7. While outside at recess, a group of 21 students formed three soccer teams. They were not playing by standard soccer rules for number of players. The teams played each other for 4 minutes before switching up teams. Write an equation to model this situation and then show your work to solve for the number of students on each team.

Equation: $3x = 21$

Work:
$$\begin{array}{r} 3x = 21 \\ \hline 3 \quad 3 \\ \hline 7 \end{array}$$

Number of cookies: 7 students on each team.

8. Think about your favorite part of lunch during your day. Create a verbal description for a one-step equation involving addition or multiplication. Use the space below to brainstorm, write your verbal description, write your equation, show your work to solve, and give your answer.

Brainstorm:

Lunch/ sharing amongst pairs.

Verbal description:

Drew has five minutes to walk from his
locker to gym class. If he takes 2 minutes
to get his stuff from his locker how much time
does he have to get to class?

Equation:

$$\begin{array}{r} 2 + x = 5 \\ -2 \quad -2 \\ \hline x = 3 \end{array}$$

Work to Solve

Solution: 3 minutes