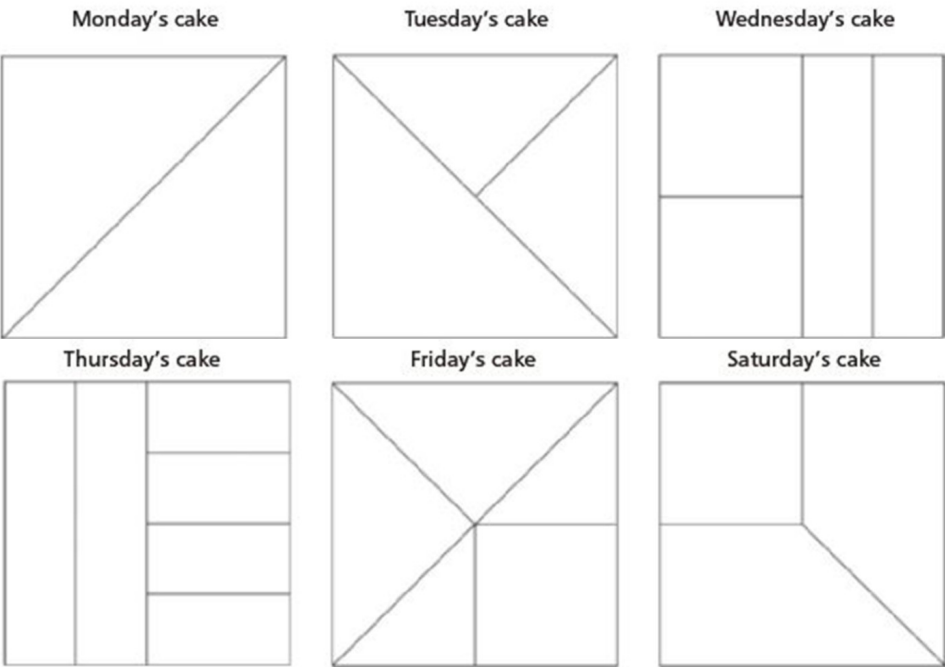


A) The Unusual Baker

George is a retired math teacher who makes cakes. He likes to cut the cakes differently each day of the week. On a price sheet George lists the fraction of the piece, and next to that, the cost of each piece. Determine the fractions of each piece of cake and how much each costs if the whole cake is \$10.



B) Review Stations

Evaluate each of the following without a calculator.

- | | |
|-----------------------------------|---|
| a) $-3(4-6) + (-2)^3 =$ | e) $\left(\frac{3}{-4}\right)\left(\frac{-8}{9}\right) =$ |
| b) $(-3)^2 =$ | f) $\left(-2\frac{2}{3}\right) \div \frac{2}{9} =$ |
| c) $\frac{(-5-7) \div 3}{-5+3} =$ | |
| d) $\frac{3}{4} - \frac{5}{6} =$ | |

Simplify the following expressions.

- a) $4x - 3 + 2x + 7 =$
- b) $2x^2 + 3x - x^2 + x =$
- c) $2(3a - 5b) =$
- d) $5(2x - 3) - 2(4x - 7) =$

Solve the following equations.

- | | |
|-----------------------|--|
| a) $3x - 5 = 7$ | f) $\frac{x}{2} - 5 = 4$ |
| b) $4x + 11 = 1$ | |
| c) $\frac{x}{3} = -2$ | g) $\frac{x}{4} + \frac{2}{3} = \frac{x}{6}$ |
| d) $3(x - 4) = 15$ | h) $\frac{x-2}{2} = \frac{x+1}{5}$ |
| e) $4x + 9 = 2x - 3$ | |

$$\begin{aligned}\textcircled{1} a) & -3(4-6) + (-2)^3 \\ & = -3(-2) + (-8) \\ & = 6 - 8 \\ & = -2\end{aligned}$$

$$b) (-3)^2 = 9$$

$$\begin{aligned}c) & \frac{(-5-7) \div 3}{-5+3} \\ & = \frac{-12 \div 3}{-2} \\ & = \frac{-4}{-2} \\ & = 2\end{aligned}$$

$$\begin{aligned}\frac{4}{2} & = \frac{2}{1} \\ & = 2\end{aligned}$$

$$\begin{aligned}
 d) \quad & \frac{3}{4} - \frac{5}{6} \\
 & \quad \quad \quad \begin{matrix} \times 3 & \times 2 \\ \times 3 & \times 2 \end{matrix} \\
 & = \frac{9}{12} - \frac{10}{12} \\
 & = -\frac{1}{12}
 \end{aligned}$$

$$\begin{aligned}
 f) \quad & \left(-2\frac{2}{3}\right) \div \frac{2}{9} \\
 & = -\frac{6+2}{3} \div \frac{2}{9} \\
 & = -\frac{8}{3} \div \frac{2}{9} \\
 & = -\frac{\cancel{8}^4}{\cancel{3}_1} \times \frac{\cancel{9}^3}{\cancel{2}_1} \\
 & = -\frac{12}{1} \\
 & = -12
 \end{aligned}$$

$$\begin{aligned}
 e) \quad & \left(\frac{\cancel{3}^1}{\cancel{-4}_1}\right) \left(\frac{\cancel{-8}^2}{\cancel{9}_3}\right) \\
 & = \frac{2}{3}
 \end{aligned}$$

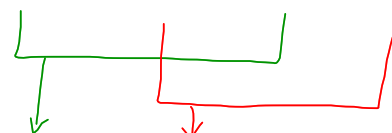
$$\begin{aligned}
 & \left\{ -\left(\frac{2}{\cancel{1}_1} + \frac{2}{3}\right) \right. \\
 & \quad \quad \quad = -\left(\frac{6}{3} + \frac{2}{3}\right) \\
 & \quad \quad \quad = -\frac{8}{3}
 \end{aligned}$$

$$\textcircled{2} \text{ a) } 4x - 3 + 2x + 7$$

$$= 6x + 4$$

$$\text{c) } 2(3a - 5b)$$

$$= 6a - 10b$$

$$\text{b) } 2x^2 + 3x - x^2 + x$$

$$= x^2 + 4x$$

$$\text{d) } 5(2x - 3) - 2(4x - 7)$$

$$= 10x - 15 - 8x + 14$$
$$= 2x - 1$$

$$\textcircled{3} \quad a) \quad 3x - 5 = 7$$

$$3x = 7 + 5$$

$$\cancel{3}x = \frac{12}{\cancel{3}}$$

$$x = 4$$

$$3x - 5 = 7$$

$$3x = 12$$

$$x = 4$$

$$b) \quad 4x + 11 = 1$$

$$\frac{4x}{\cancel{4}} = \frac{-10}{\cancel{4}2}$$

$$x = -\frac{5}{2}$$

$$c) \quad \frac{x}{3} = -2$$

$$x = -6$$

$$d) \quad 3(x-4) = 15$$

$$3x - 12 = 15$$

$$3x = 27$$

$$x = 9$$

$$\frac{3(x-4)}{\cancel{3}} = \frac{15}{\cancel{3}}$$

$$x - 4 = 5$$

$$x = 9$$

.....

$$h) \quad \frac{x-2}{2} = \frac{x+1}{5}$$

$$5(x-2) = 2(x+1)$$

$$5x - 10 = 2x + 2$$

$$3x = 12$$

$$x = 4$$

$$\frac{5}{\cancel{10}} \left(\frac{x-2}{\cancel{2}} \right) = \frac{2}{\cancel{10}} \left(\frac{x+1}{\cancel{5}} \right)$$