Key

Do Oreo Cookies Make Sense?

 Write the expression for a regular Oreo. Define your variables. $2w + 1f$ w = wafer f = filling	 Write the expression for a Triple Double Oreo. Define your variables $3w + 2f$ w = wafer f = filling
What is the weight of one Oreo? Explain how you determined this. $\frac{34}{3} \approx 11.3$ g from nutrition label	What is the weight of one Triple Double Oreo? Explain how you determined this. 21 g from nutrition label
How many calories are in one Oreo? Explain how you determined this. $\frac{160}{3} \approx 53.3$ cal from nutrition label	How many calories are in one Triple Double Oreo? Explain how you determined this. 100 calories from nutrition label
What is the cost of one Oreo? Explain how you determined this. $3.00 per package 3 x 12 = 36 cookies per package $\frac{3.00}{36} \approx \$0.08$ per cookie	What is the cost of one Triple Double Oreo? Explain how you determined this. $\frac{3.00}{18} \approx \$0.17$ per cookie

You must show all work!!	
• Write an equation for the weight (in grams) of a regular Oreo. $2w + 1f = 2.83$	• Write an equation for the weight (in grams) of a Triple Double Oreo. $3w + 2f = 21$

Write and solve the system of equations to determine the weight of the cookie wafer and of the filling. Do your answers make sense? Explain.

$2w + 1f = 11.3$
$3w + 2f = 21$

$4w + 2f = 22.6$
$-(3w + 2f = 21)$
$w = 1.6$

$2(1.6) + 1f = 11.3$
$3.2 + 1f = 11.3$
$1f = 8.1$ g

What is the weight of the wafer? 1.6 grams

What is the weight of the filling? 8.1 grams

You must show all work!!!

- Write an equation for the calories in a regular Oreo.

$2w + 1f = 53.3$

- Write an equation for the calories in a Triple Double Oreo.

$3w + 2f = 100$ calories

Write and solve the system of equations to determine the number of calories in the cookie wafer and in the filling. Do your answers make sense? Explain.

$2w + 1f = 53.3$
$3w + 2f = 100$

$4w + 2f = 106.6$
$-(3w + 2f = 100)$
$w = 6.6$ calories

$2(6.6) + 1f = 53.3$
$13.2 + 1f = 53.3$
$f = 40.1$

How many calories in the wafer? 6.6 calories

How many calories in the filling? 40.1 calories

You must show all work!!!

What is the cost of one regular Oreo?

$2w + 1f = .08$

- Write an equation for the cost of a regular Oreo.

What is the cost of one regular Triple Decker Oreo?

$3w + 2f = 0.17$

- Write an equation for the cost of a Triple Double Oreo.

Write and solve the system of equations to determine the cost of the cookie wafer and the filling. Do your answers make sense? Explain.

$2w + 1f = .08$
$3w + 2f = .17$

$4w + 2f = 0.16$
$-(3w + 2f = 0.17)$
$w = -0.01$

It does not make sense that a wafer would cost a negative amount. The pricing model used by the company may not be directly related to the number of cookies in the package.

What is the cost of a wafer?

What is the cost of the filling?