

What does 2,000 calories
look like?

Prediction

There is a list of foods on the following slide. You will consider how many of each food would equal the average person's maximum daily intake in a 2,000 calorie diet.

Your task is to write a guess that is too high and too low, but not outrageously extreme for each.

You will only be given a few minutes to write down your predictions. If you don't finish, that is ok. Questions?

How many of each will yield 2000 calories? Give a number that is too high and too low for each.

- Bagel
- Glazed Doughnut
- Eggs
- Slices of bacon
- Cinnabon
- Cinnamon Roll
- Big Mac
- Chicken McNuggets
- Large McDonald's Fries
- Banana
- Avocado
- Chipotle Burrito
- Cheese Pizza
- Slices of Bread
- M&M's
- Almonds
- Carrots
- Cobb Salad

How many of each will equal 2000 calories?

- Bagel
- Glazed Doughnut
- Eggs
- Whole Cheese Pizza
- Banana

Too high and too low,
but not extreme guess
for each food listed.

Here is a link with additional information:

<http://robertkaplinsky.com/work/what-does-2000-calories-look-like/>

For each slide and question that follows:

- 1) Create an algebraic equation that will help you solve the question.
- 2) Solve for your variable and interpret the results. (YOU MAY USE A CALCULATOR FOR THIS, BUT WRITE DOWN ALL STEPS!)

What is an acceptable algebraic equation? What is the difference?

YES

$$7x+2=15$$

NO

$$15/2=x$$

How many calories is one bagel?



Solution

One step equation: $2000/x=7$ OR $7x=2000$

One bagel is approximately 285.714 calories

How many calories is one Cinnabon?



Solution

One step equation: $2000/x=2.27$ OR
 $2.27x=2000$

One Cinnabon Cinnamon roll is approximately
881.06 calories



How many
slices of bacon
are equal to one
doughnut?



What are/were your strategies to solve?

Solution: Roughly 7.57 slices of bacon is equal to one doughnut.

$(2000/50)x = 2000/6.60$ (Which can be simplified to $40x=303$)

How many bananas could you consume if you wanted 1500 of your 2000 calories to come from bananas?



One step equation

$$(2000/19)x = 1500$$

about 14.25 bananas

(you could say 14 bananas, because who wants to use $\frac{1}{4}$ of a banana and have the rest go brown...or freeze the rest for a smoothie, whatever!)

If you had already eaten 850 calories, what is the maximum number of slices of bread you could eat if you wanted to eat exactly 1000 calories?



Equation/Solution

$$850 + 71.42x = 1,000$$

OR

$$71.42x = 150$$

about 2.1 slices

For the following scenarios, translate into equations, and then solve.

How many more bagels could you eat if you have already eaten 4 of them and want to eat exactly 2,200 calories?



Equation

$$4(285.714) + 285.714x = 2,200$$

Equation

Unit rate needed: 1 bagel is (rounded to three decimal places)
285.714 calories (Where did this number come from?)

$$285.714(4) + x(285.714) = 2200$$

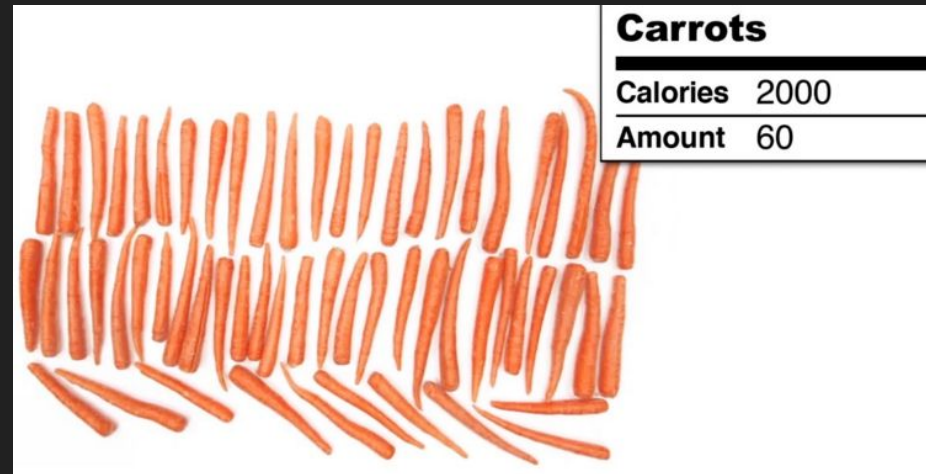
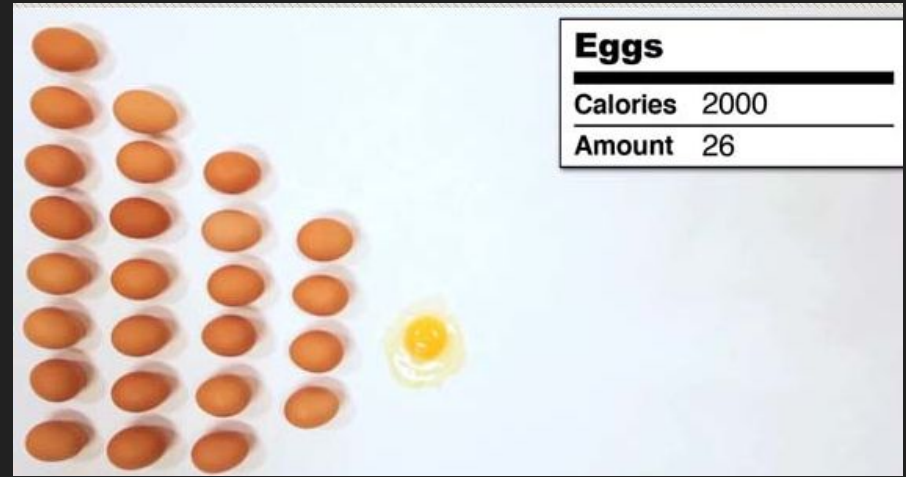
$$1142.856 + 285.714x = 2200$$

$$1142.856 - 1142.856 + 285.714x = 2200 - 1142.856$$

$$285.714x / 285.714 = 1057.144 / 285.714$$

$x = 3.7$ So, you could eat almost and additional 3.7 bagels, or maybe just 3 to be safe...

Last equation question:
What is the maximum
number of carrots or
eggs you could eat if
you have already eaten
720 calories and want
to eat exactly 1, 800
calories?



Equations

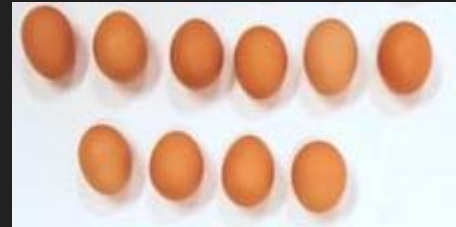
Carrots

$$(2000/60)x + 720 = 1800$$

$x = 32.4$ carrots



Eggs



$$(2000/26)x + 720 = 1800$$

14.04 eggs. Many would probably argue that one could not eat .04 eggs, so maybe 14 is a better answer.



What are your takeaways from this lesson?

If I inadvertently made you hungry, sorry, but you missed the point! What are mathematical takeaways?