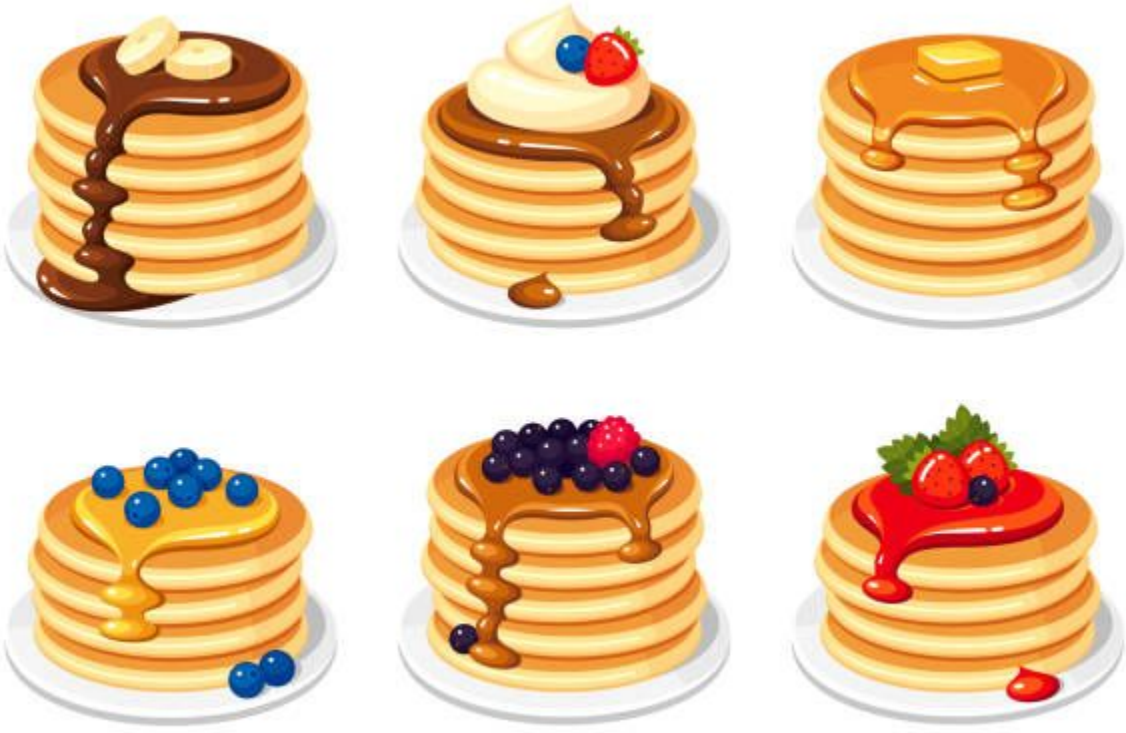
Pancakes and Proportions



istock

Algebra 1A * Ms Johnson

Austin Horner * 2022-12-31

We use proportional relationships when we make pancakes. This uses 1 cup of mix to ⅔ cup of water.

https://photos.google.com/share/AF1QipNaeM-mzak0aOhR7I7HiU88B0x_VtYhvimBB2QI_SCeddFhnYD-LCJqcbAkCJnNzw/photo/AF1QipPr7KJwKO-YkRtmjfcJMisV5fV272HNiH-9UXak?key=bzhwU3prUllDTTNfaUlXV000ZUtfRU1MT3NPZmVR

Table of Values

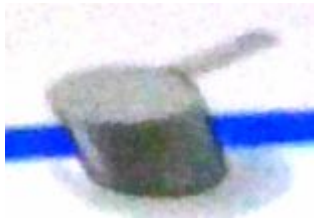
4-INCH PANCAKES	MIX	COLD WATER
6 - 7	1 Cup	2/3 Cup
12 - 14	2 Cups	1⅓ Cups
18 - 21	3 Cups	2 Cups
24 - 28	4 Cups	2⅔ Cups

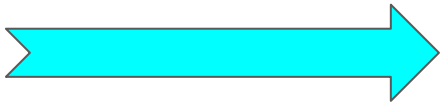
Tip For thinner pancakes, add more water. For thicker pancakes, add more mix.

1 **HEAT** griddle to 375°F

HEAT pancake griddle to 375°F (medium heat). *Lightly grease griddle.*

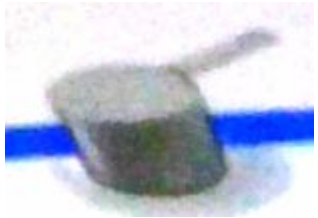
Pancakes and Proportions 1:6

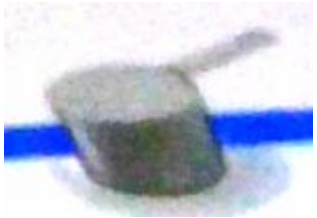


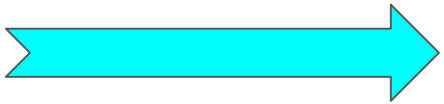


1 cup of mix makes 6 pancakes

Pancakes and Proportions 1:6



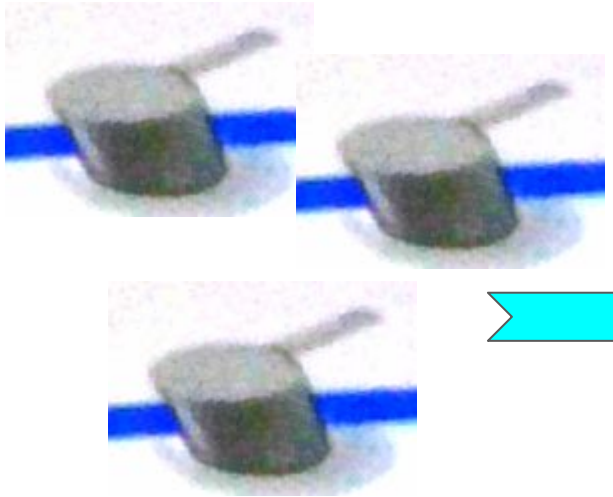




2 cups of mix makes 12 pancakes

Pancake equation $y = 6x$

Proportion $y = kx$. Constant of proportionality $k = 6$



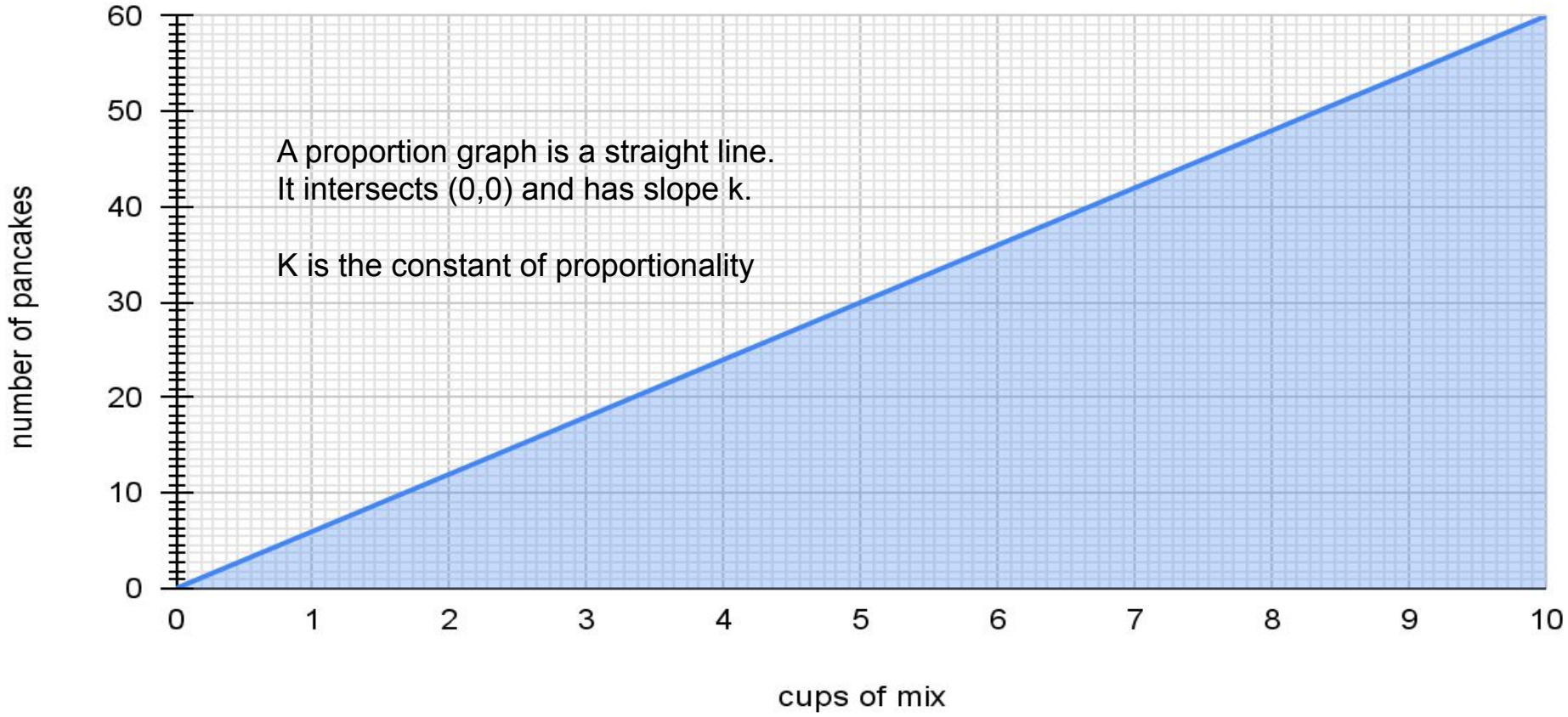
3 cups of mix makes 18 pancakes

What if you need 50 pancakes for a party?

Table of Values

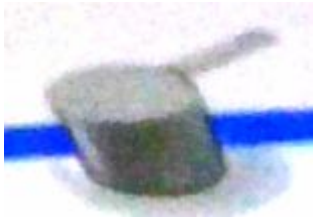
cups of mix	number of pancakes
0	0
1	6
2	12
3	18
4	24
5	30
6	36
7	42
8	48
9	54
10	60

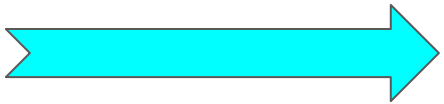
number of pancakes vs. cups of mix



Pancake number $y = 6x$ cups of mix

$50 = 6x$

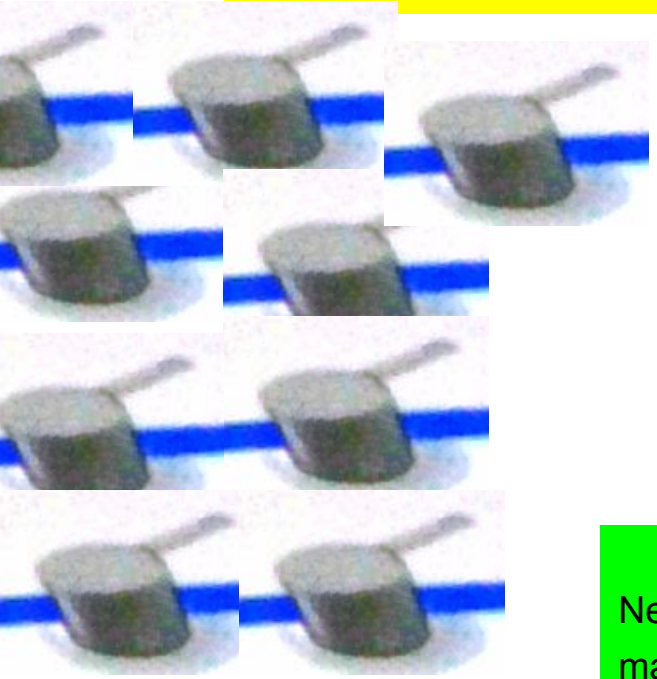




To make 50 pancakes, Solve the equation for y = 50.

The equation for the number of pancakes is y = 6x

Solve Equation for 50 pancakes: 50 = 6x



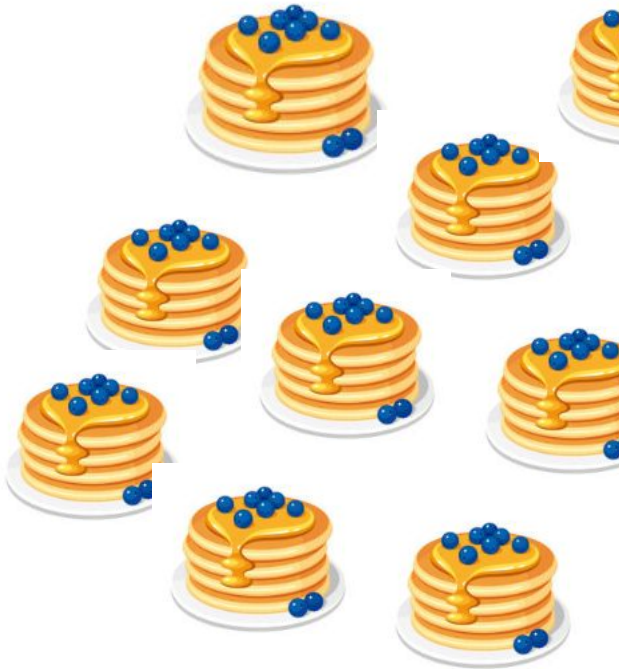
6x = 50 Switch order. Rewrite with x on left

x = 50/6 Isolate x. **Divide both sides by 6**

x = 8 2/6 Reduce fraction

x = 8 ⅓ Need 8 ⅓ cups

Need **8 ⅓** cups of mix to make 50 pancakes



How much water?

Table of Values

that nothing brings people together better than delicious food.



4-INCH PANCAKES	MIX	COLD WATER
6 - 7	1 Cup	2/3 Cup
12 - 14	2 Cups	1⅓ Cups
18 - 21	3 Cups	2 Cups
24 - 28	4 Cups	2⅔ Cups

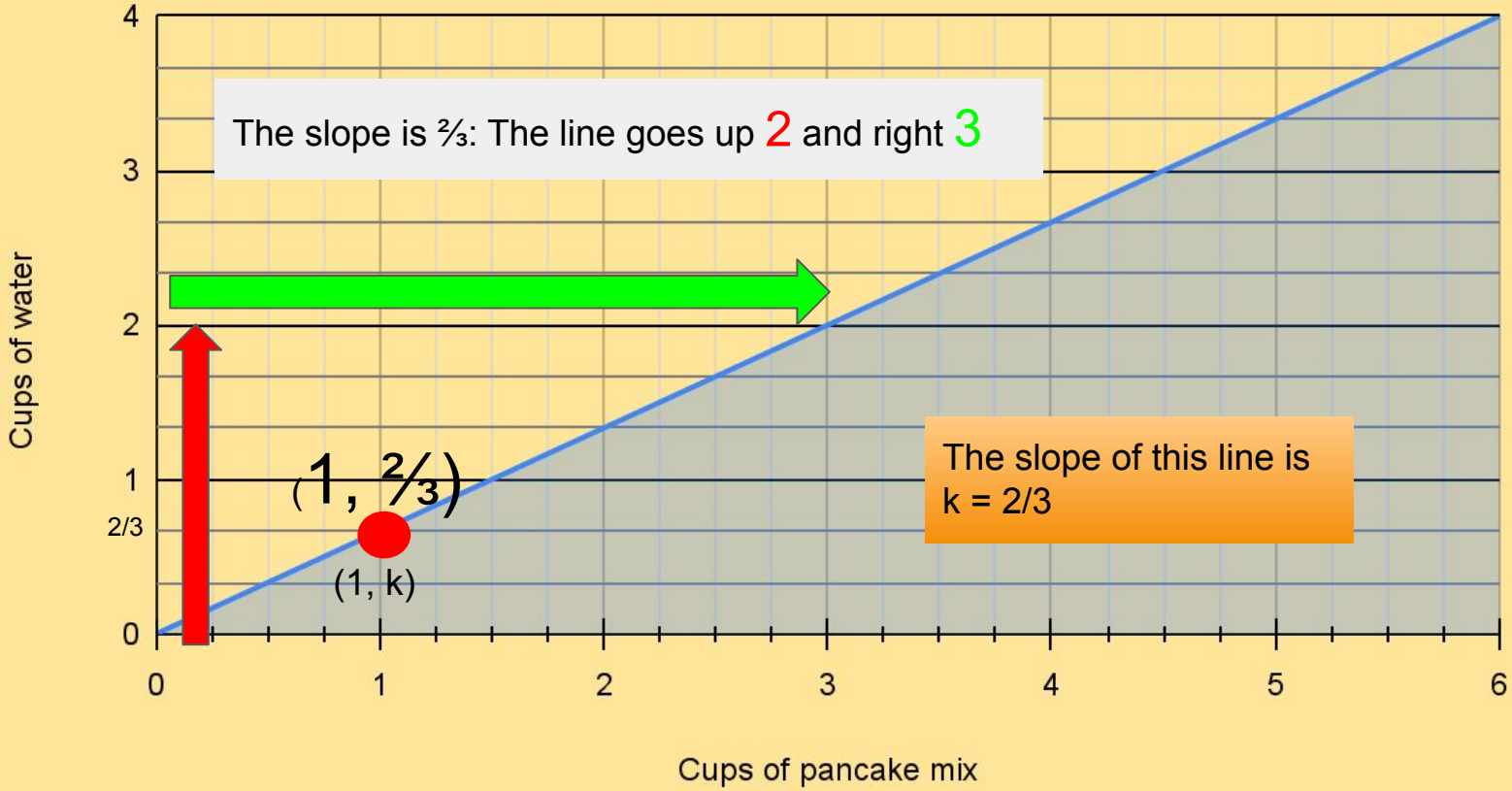
For thicker pancakes, add more mix.

Water Equation: $y = \frac{2}{3}x$. Need ⅔ cups of water for cup of mix

1 HEAT griddle to 375°F

HEAT pancake griddle to 375°F (medium heat).
Lightly grease griddle.

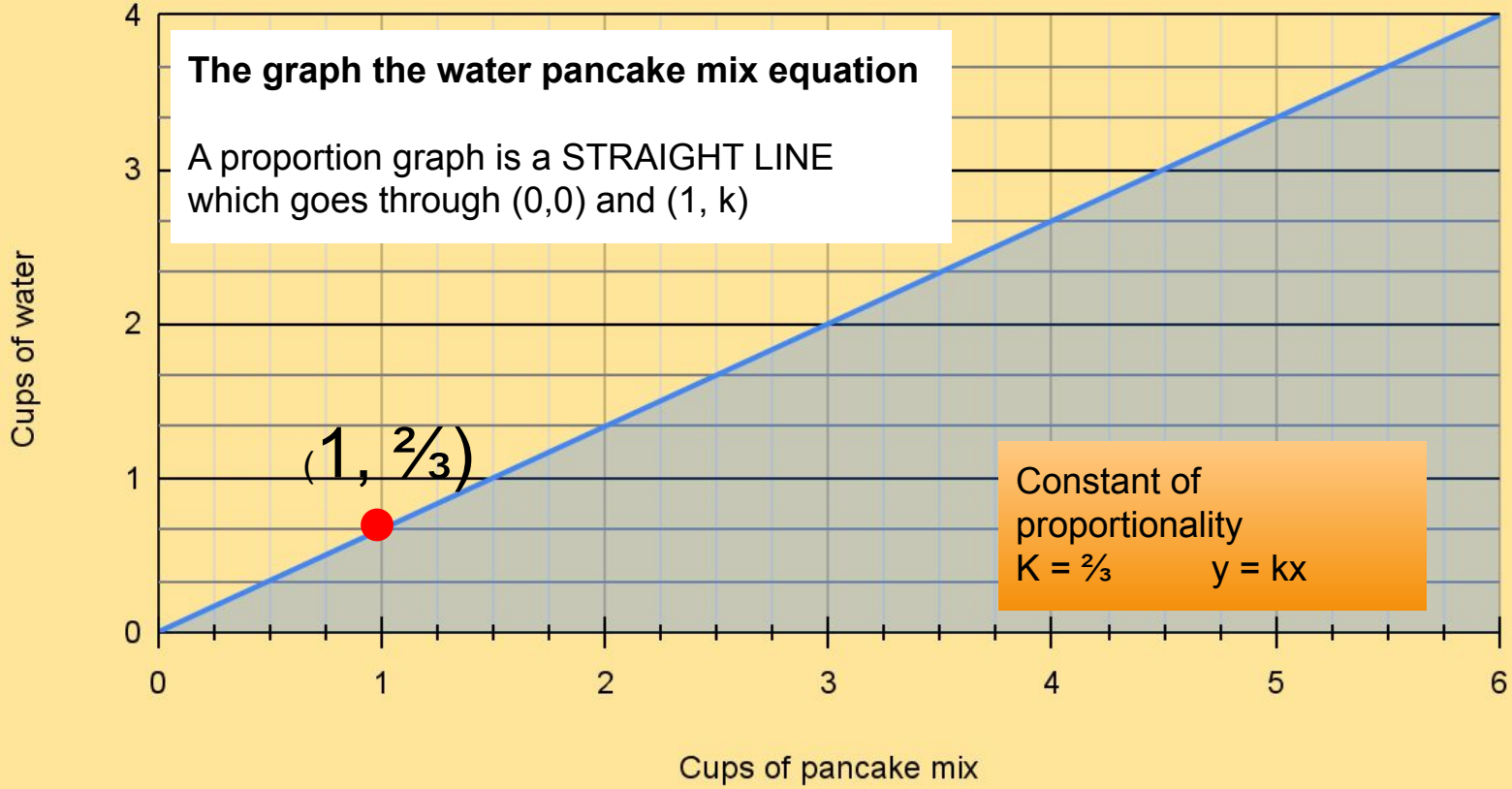
Cups of pancake mix vs. cups of water y = 2/3 x



The graph of a proportional relationship is a straight line that goes through (0,0) and (1, k)

https://photos.google.com/share/AF1QipNQ4Ek_NeHpEBQnDa1vxX_v-KBD-RYgLztZnTC_SkQ7iQt027xcMEvDNStWr1VNTw/photo/AF1QipOp_19NHTGSXcJRE8JIFNSoPhsCKFvjCIEPtPr5?key=T1o0bmgxYVU2QmJ0LUlJMmdHSFl1aERaQUljaHBB

Cups of pancake mix vs. cups of water y = 2/3 x



Proportional relationship

Constant of proportionality k

$y = k\ x$

$y = \frac{2}{3}\ x$ water = $\frac{2}{3}$ mix

There must be $\frac{2}{3}$ cup of water for every 1 cup of mix

Water Equation: y = ⅔ x. Water = ⅔ mix

(Water) = ⅔ (mix)

mix = 8 ⅓ cups — Calculated in step 1

mix = 25/3 cups — Convert to improper fraction

Y = ⅔ * (25) * ⅓

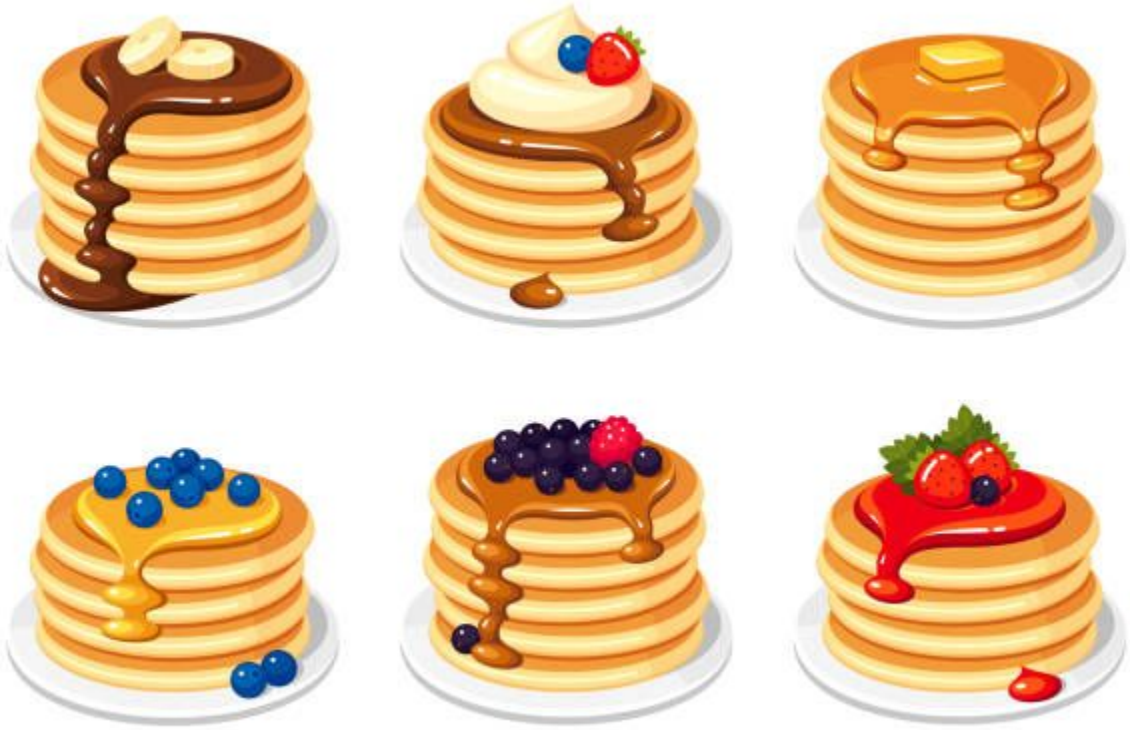
Y = 50/9

Y = 5 5/9 = 5.55 = 5 ½

X = 25/2 = 12 ½

Need 5 ½ cups of water
And 8 ⅓ cups of mix
to make 50 pancakes

Pancakes and Proportions



Algebra 1A * Ms Johnson

Austin Horner * 2022-12-31