1/27 Which tables are proportional? Both are!

# of Mules	Bales of Hay
2	1
4	2
6	3
8	4
10	5

Both x 5

Both Double

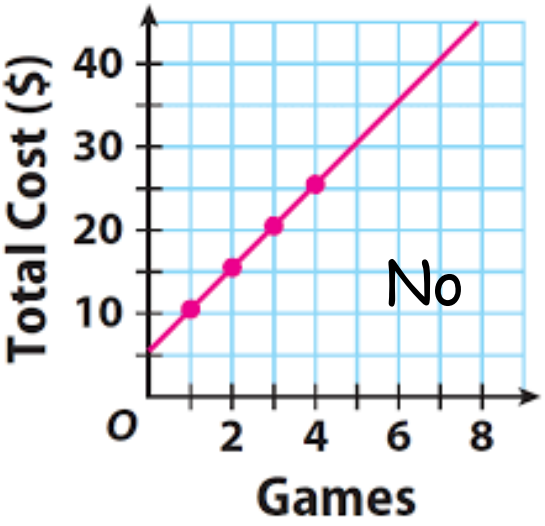
Both Double

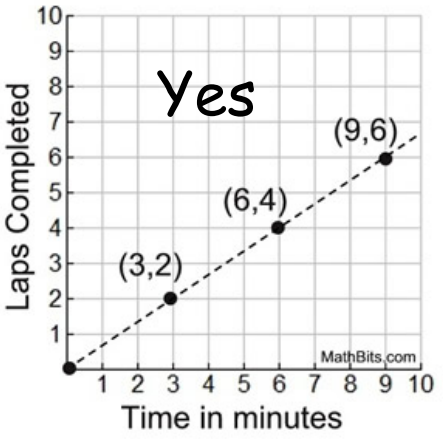
Distance (Leagues)	1	2	6	12	20,000
Distance (Miles)	3	6	18	36	60,000

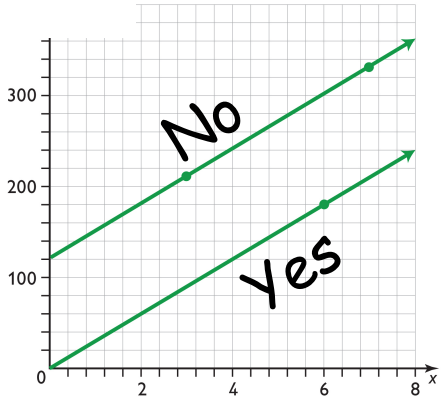
Both Double

Which graphs are proportional?

Proportional graphs: Straight lines starting at (0, 0)





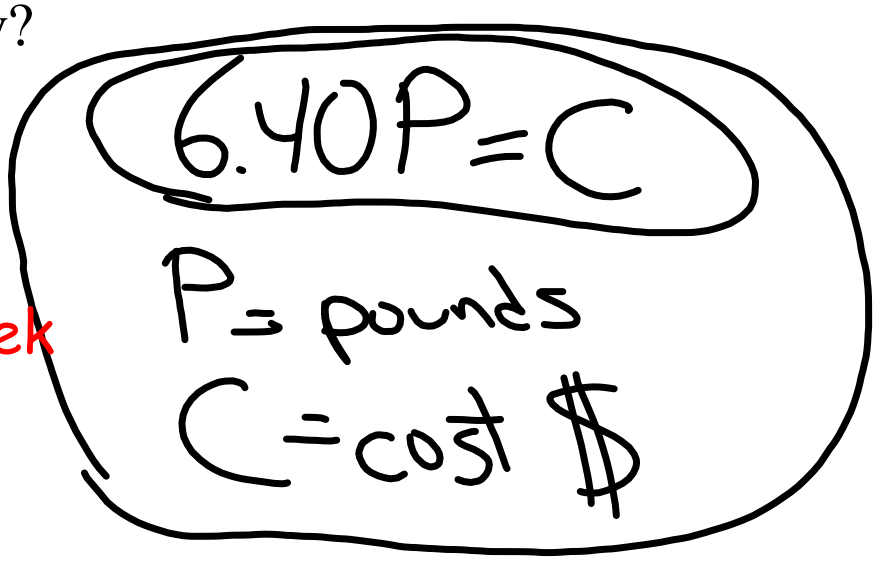


Can you use the unit rate to write a formula that Jell E. Bean can use to calculate the amount any customer will pay?

$6.40/lb yogurt

From last week

or



P(6.40)=C or 6.40·P=C

Jell E. Bean decides to start charging $0.50 for each cup before her customers started filling it with yogurt and toppings. Write a new equation to find the cost of any sundae.

$6.40/lb

From last week

$C = (6.40 \cdot y) + 0.50$

What is Robert's unit rate?

From last week

$$\frac{420 \text{ miles}}{12 \text{ gallons}} = \frac{35 \text{ miles}}{1 \text{ gallon}}$$

Unit rate

Work with your team to write the **equation** to find the exact number of miles Robert can drive with any number of gallons of gas. Be prepared to share your strategy.

$35 \cdot G = M$ G = gallons M = Miles

Four pounds of ~~chicken~~ cheese costs $7.00.
lbs

Is this a proportional relationship? yes

Write an equation to calculate the cost (c) for any weight in pounds (p) of chicken. (or cheese)

$C = 1.75p$

$C = \frac{7}{4}p$

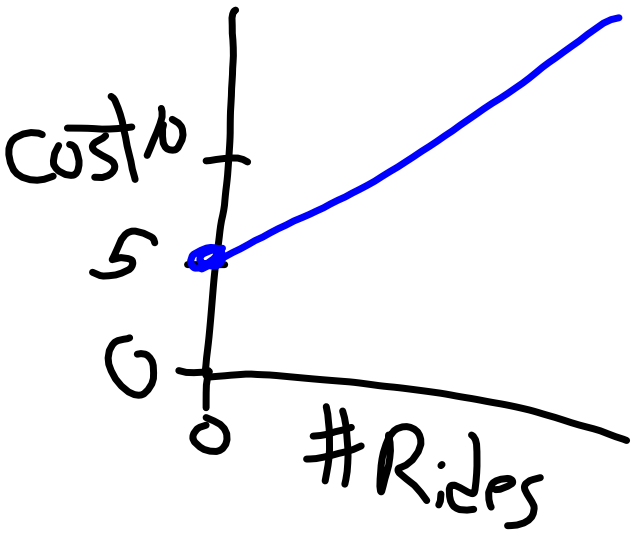
$C = 1\frac{3}{4}p$

The county fair costs $5.00 to enter and $2.00 per ride. Is this a proportional relationship? No

Write an equation to calculate the cost (C) for any number of rides (R); for 1 person

$C = 2.00r + 5.00$

$C = 5 + 2R$



1 Ride = $7

2 Rides = $9

county fair

$C = 5 + 2 \cdot R$

not proportional

chicken proportional

$C = 1.75p$

yogurt

$C = 6.40 \cdot P$

proportional

yogurt plus cup

$C = (6.40 \cdot y) + 0.50$

not proportional

Roger's gas

$35 \cdot G = M$

proportional

How can we recognize proportion equations?

Multiplication only, no adding or subtracting

Proportional Equations

$y = kx$

k ↓ constant of proportionality