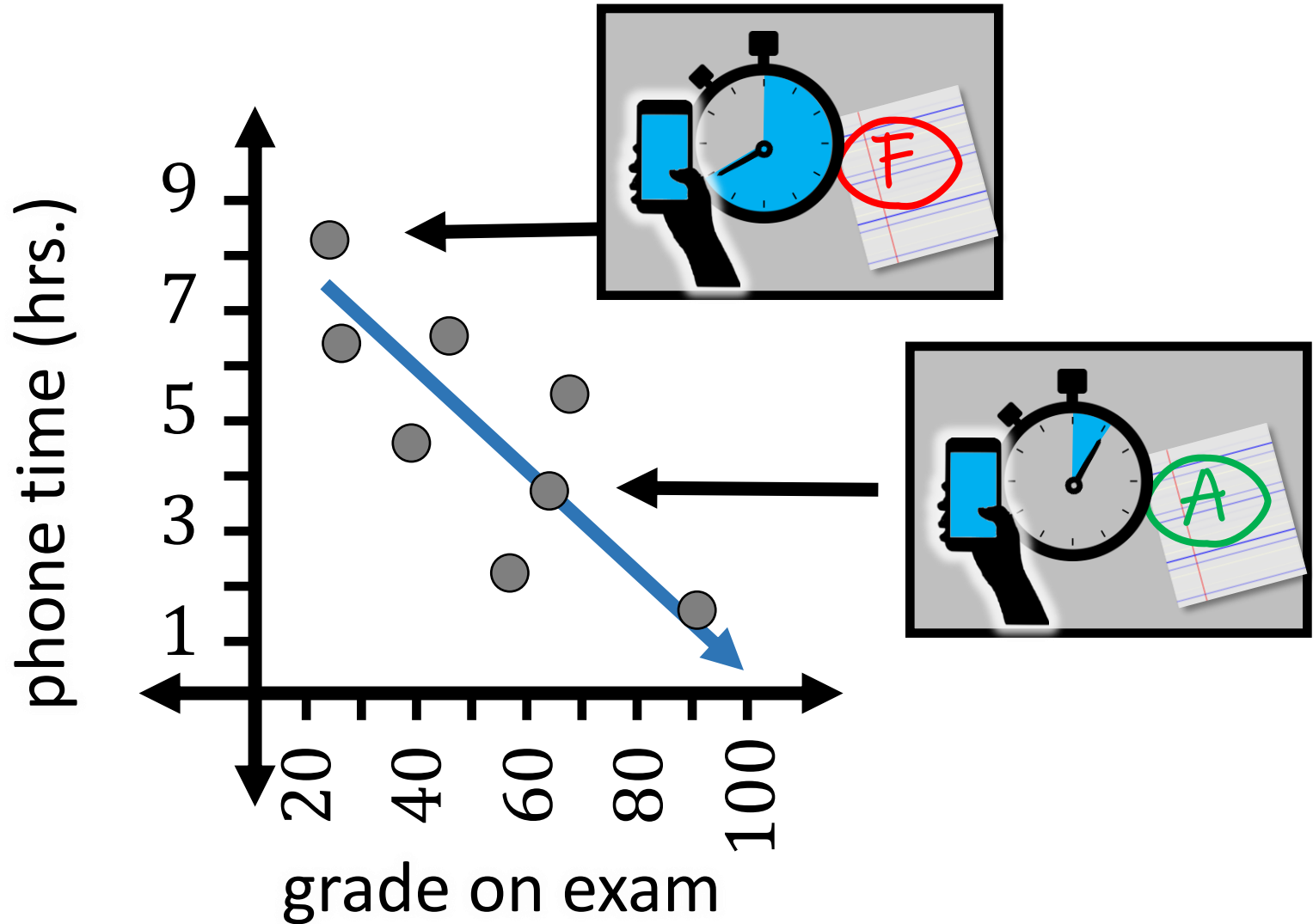


association/correlation/trend



coefficient

$$2x - 5 = 13$$



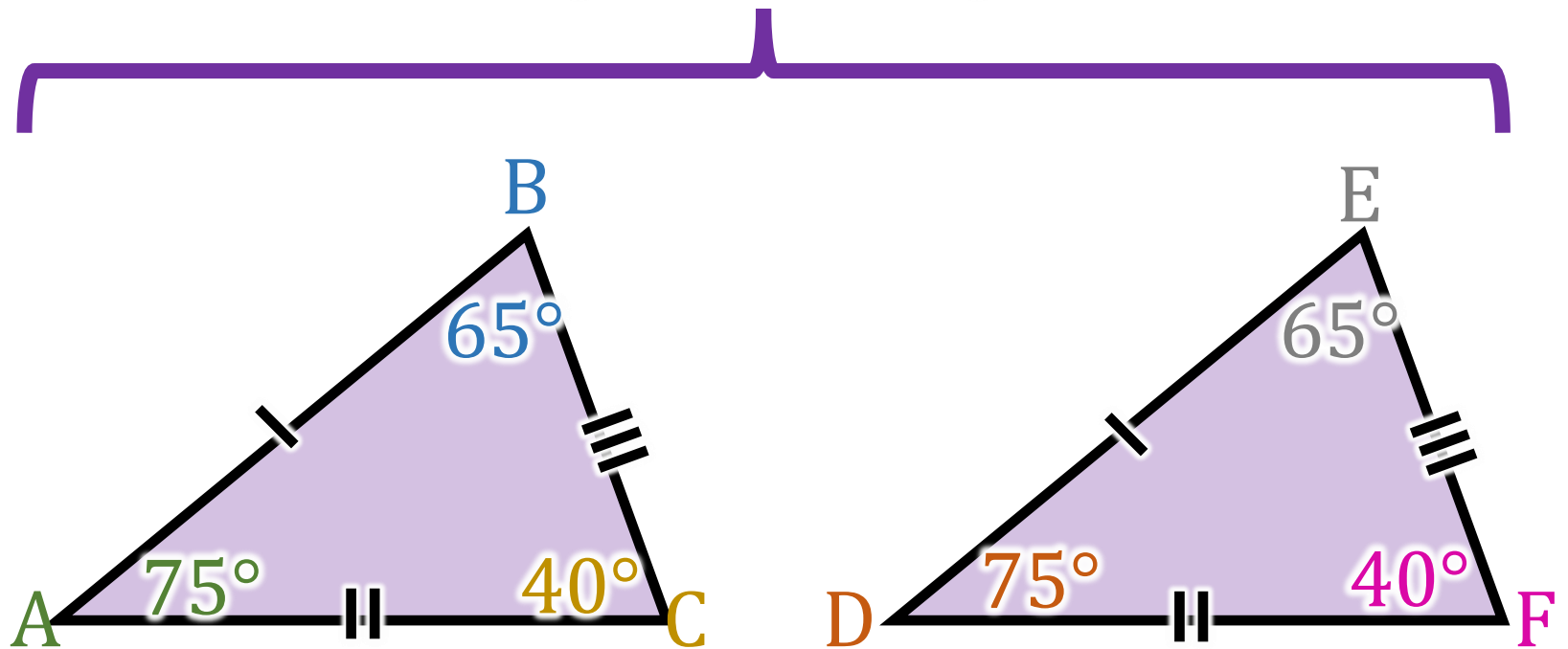
coefficient

compound interest

year	starting balance	compound interest earned (5% = 0.05)	new balance
0 yr	\$1,000	—	\$1,000.00
1 yr	\$1,000	\$50.00 →	\$1,050.00
2 yr	\$1,050	\$52.50 →	\$1,102.50
3 yr	\$1,102.50	\$55.13 →	\$1,157.63

congruent

congruent triangles



constant

$$2x - 5 = 13$$



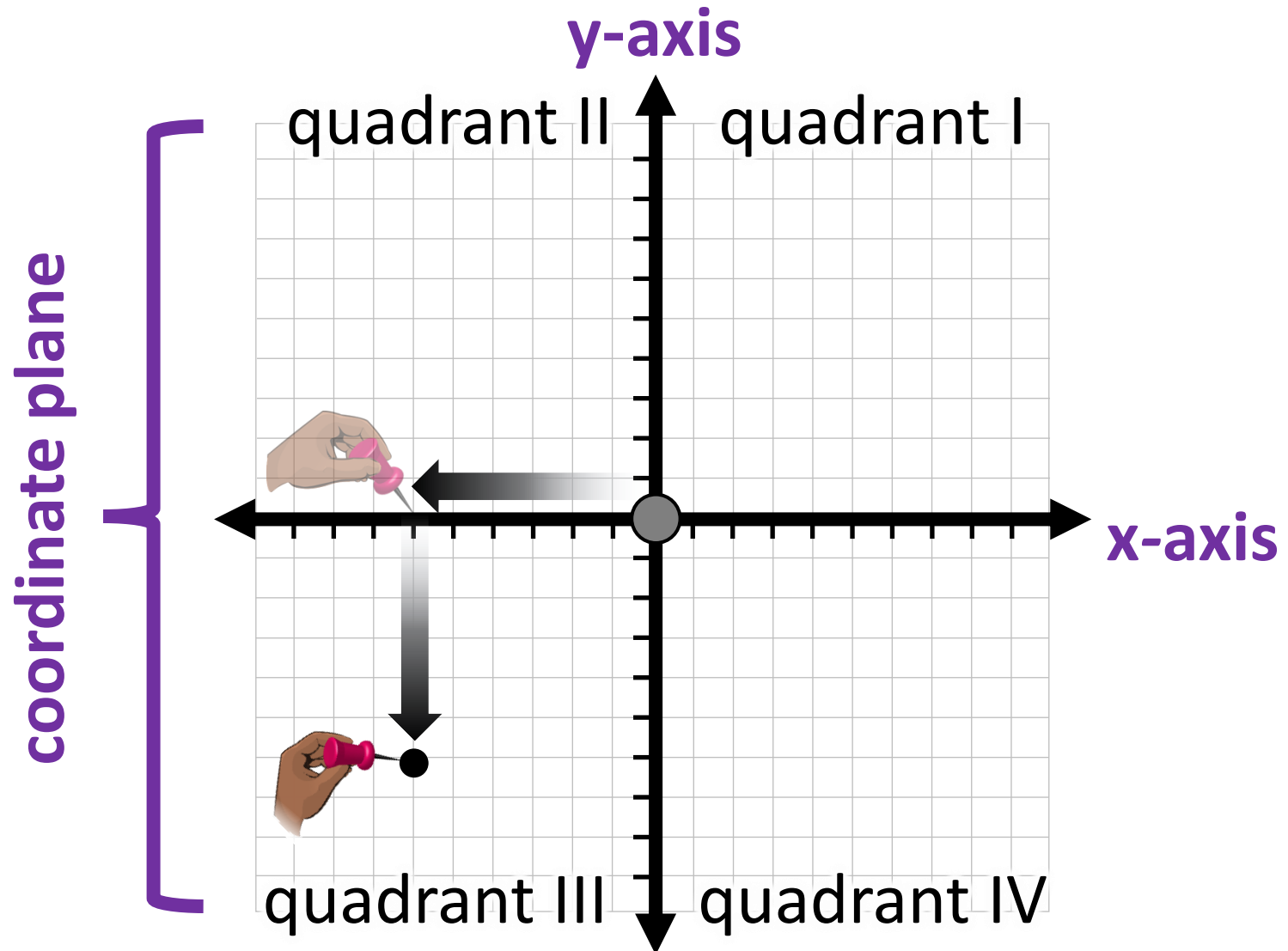
constant

constant rate of change

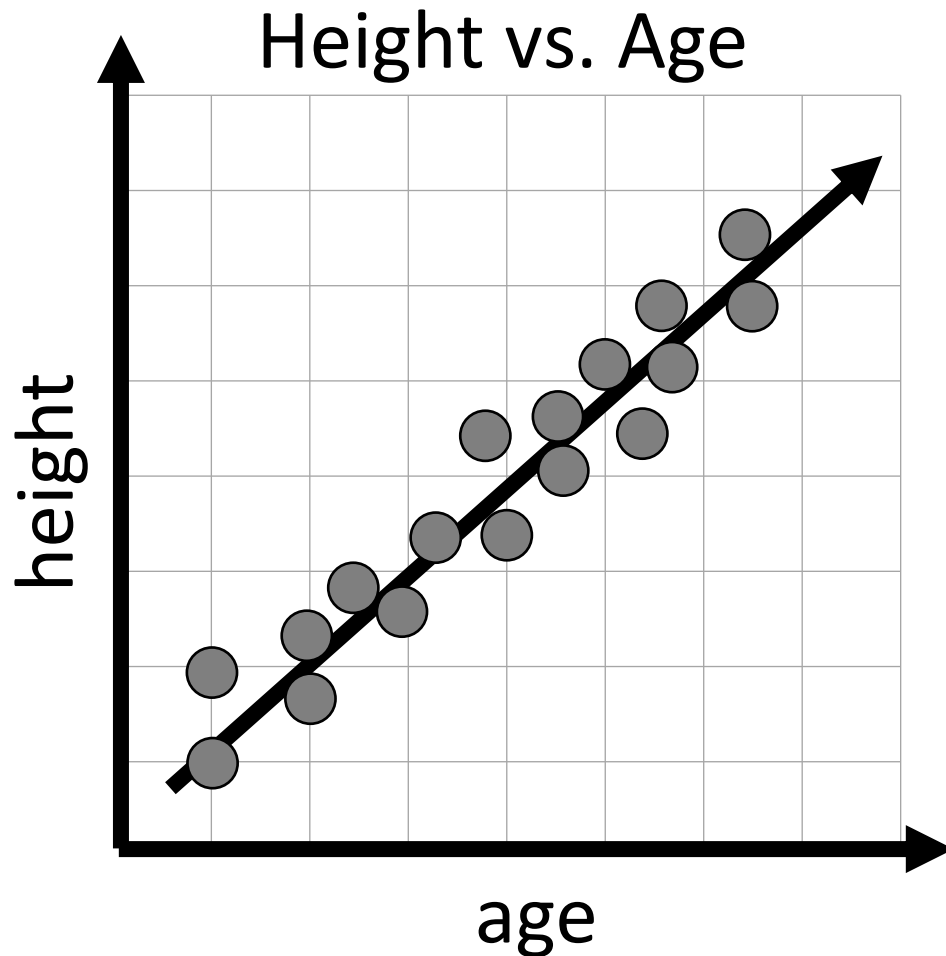
Water filling a Tank Over Time		
time (min)	water (gal)	constant rate of change
5	2	0.4 ←
10	4	0.4 ←
15	6	0.4 ←
20	8	0.4 ←
25	10	0.4 ←

constant = same

coordinate plane



correlation strength

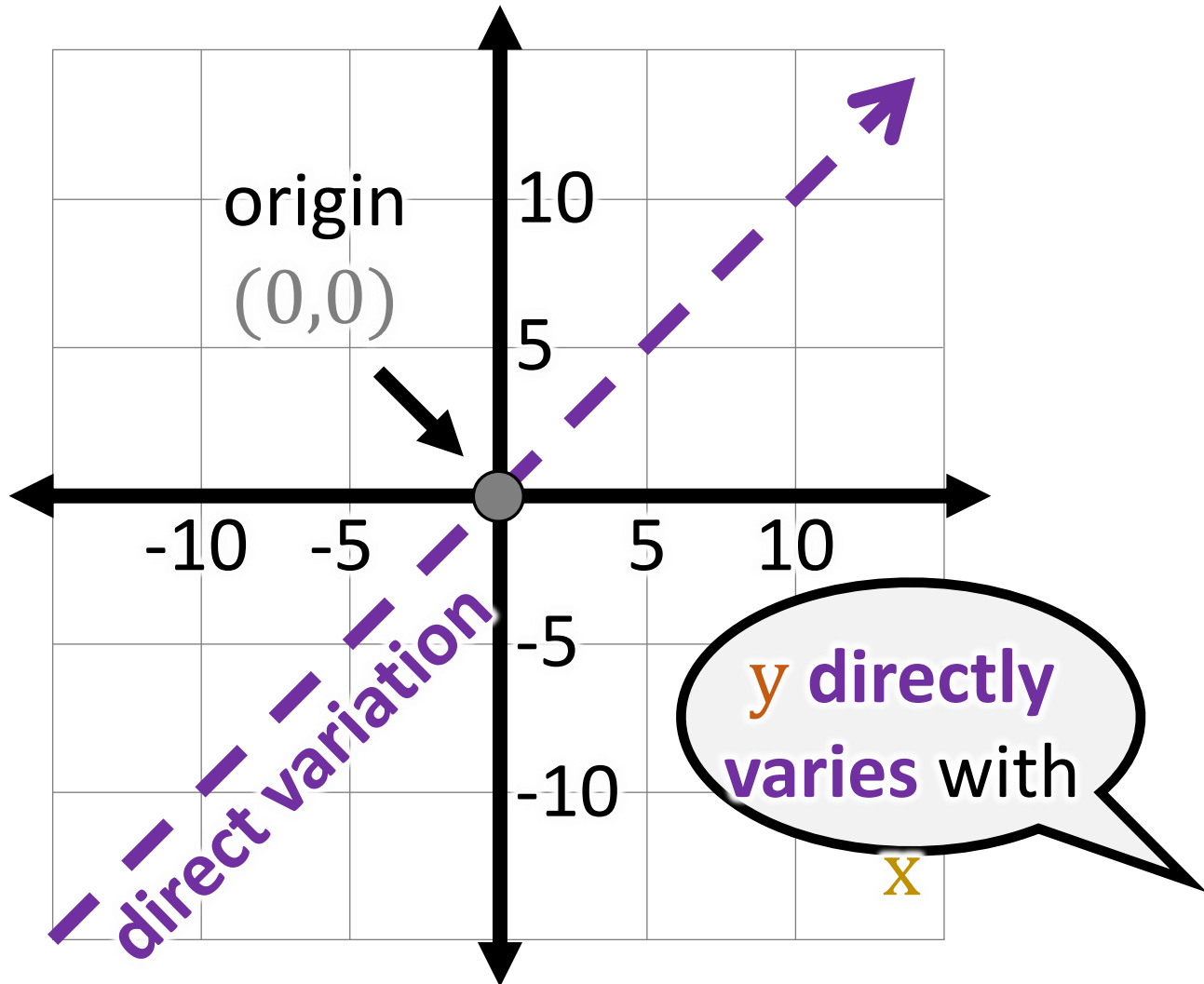


circumference



circumference

direct variation



equation

coefficient

equation

$$4x - 2 = 18$$

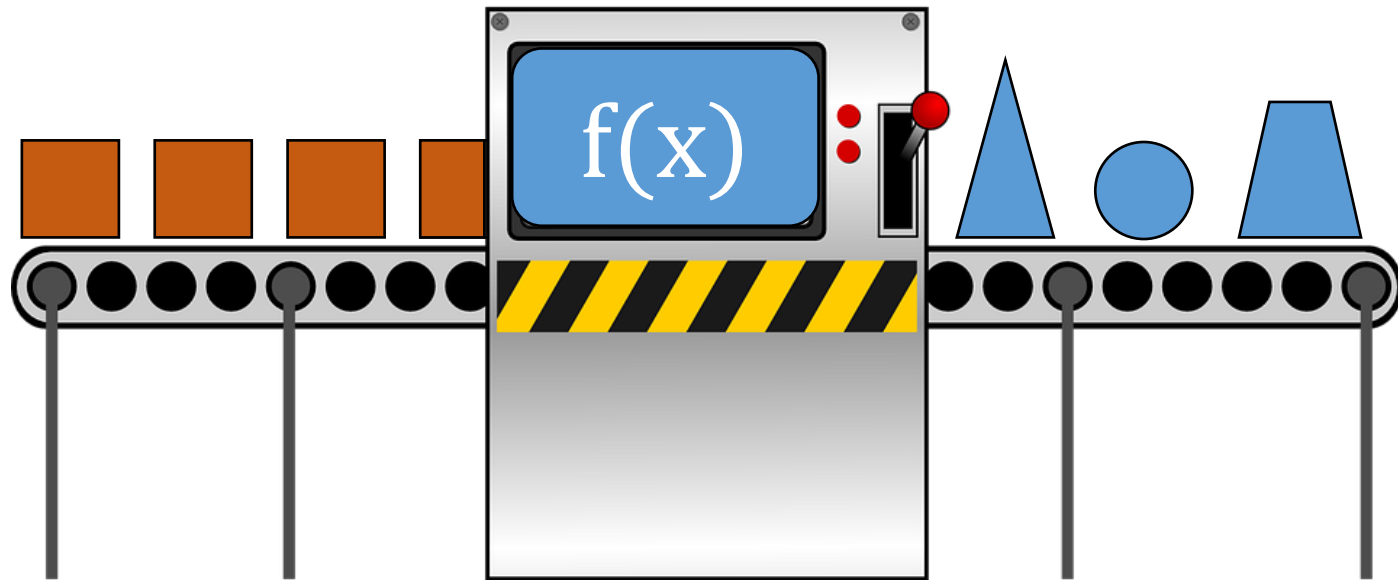
variable

constant

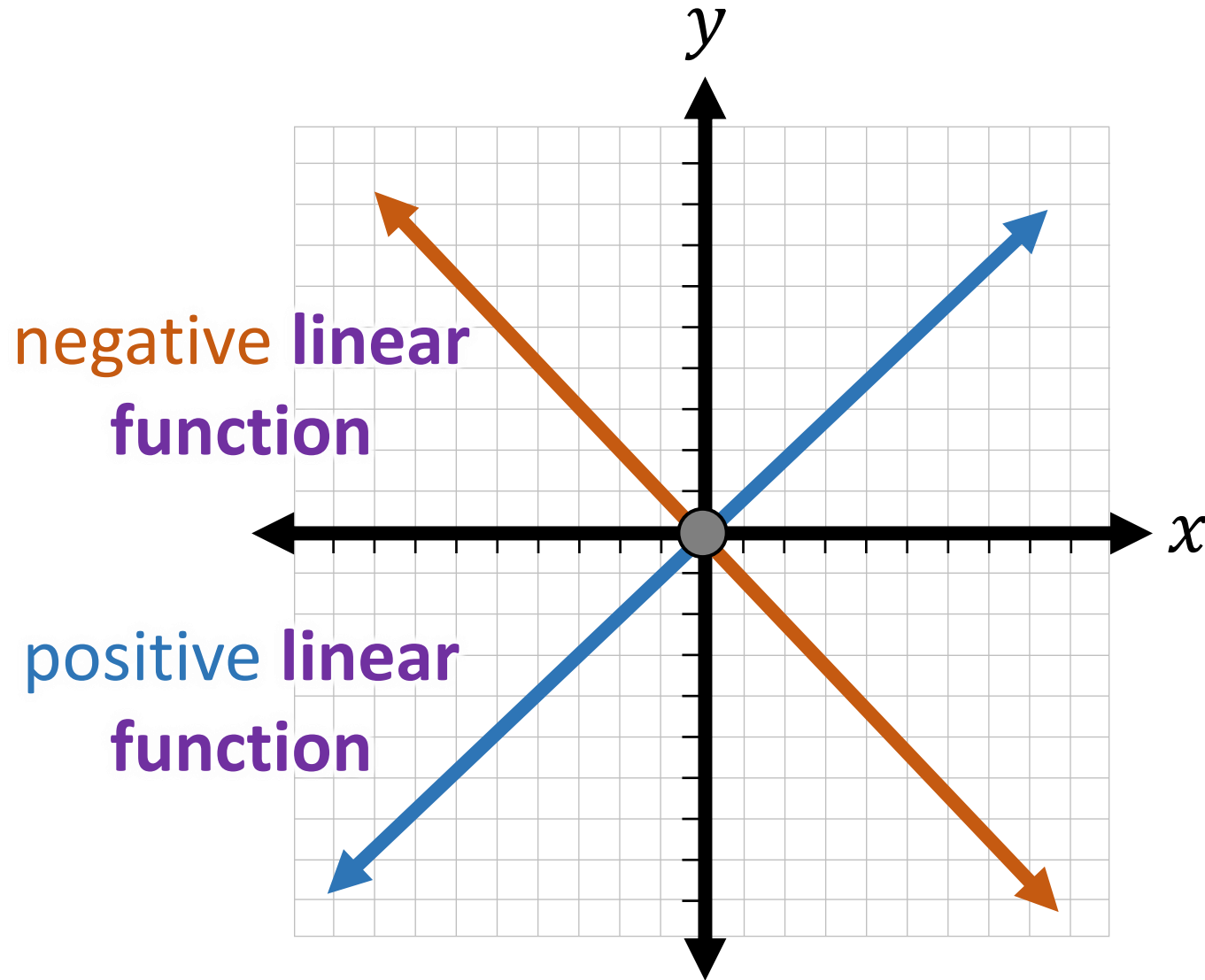
The diagram illustrates the components of the linear equation $4x - 2 = 18$. A purple bracket above the equation spans from the start of the term $4x$ to the end of the term 2 , with the label "equation" centered above it. A green arrow points from the label "coefficient" to the number 4 in the term $4x$. A blue arrow points from the label "variable" to the letter x in the term $4x$. An orange arrow points from the label "constant" to the number 2 in the term -2 .

function

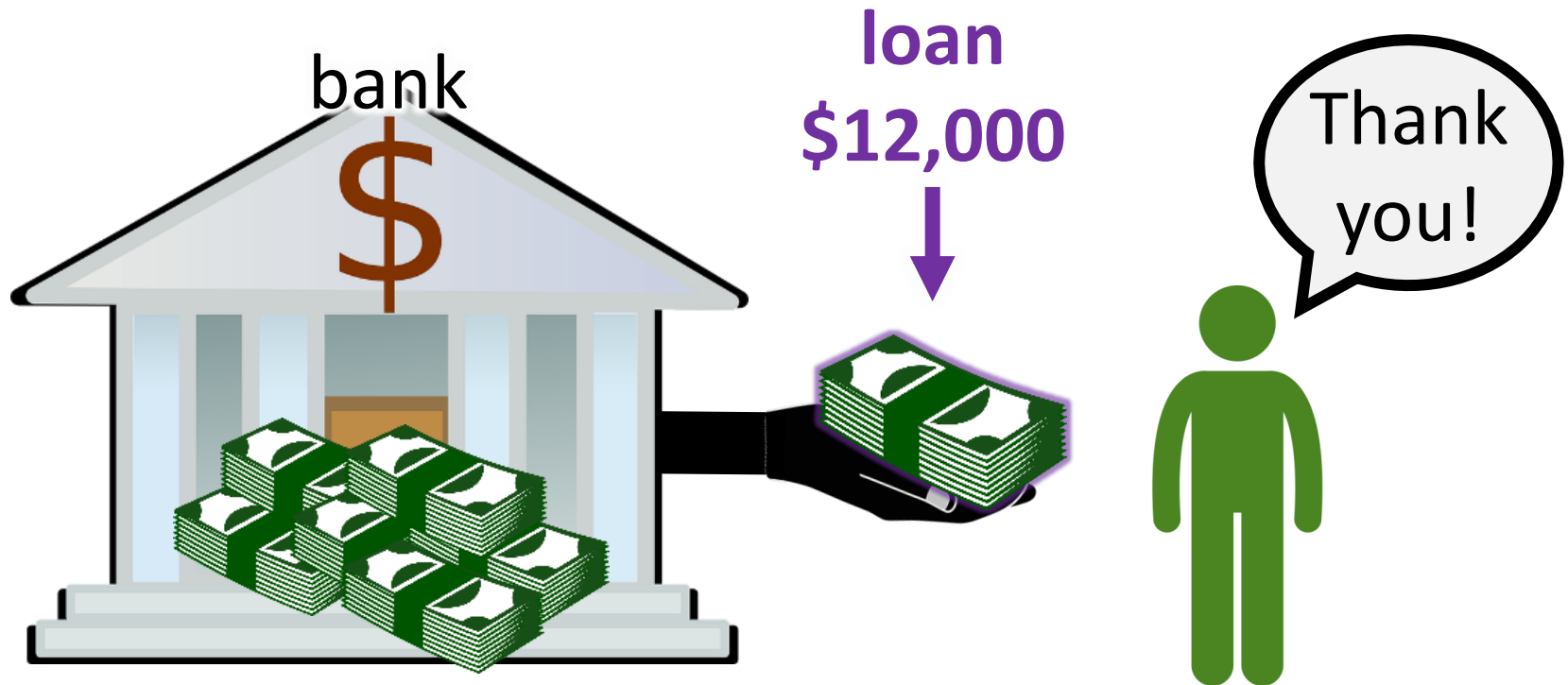
input → function → output



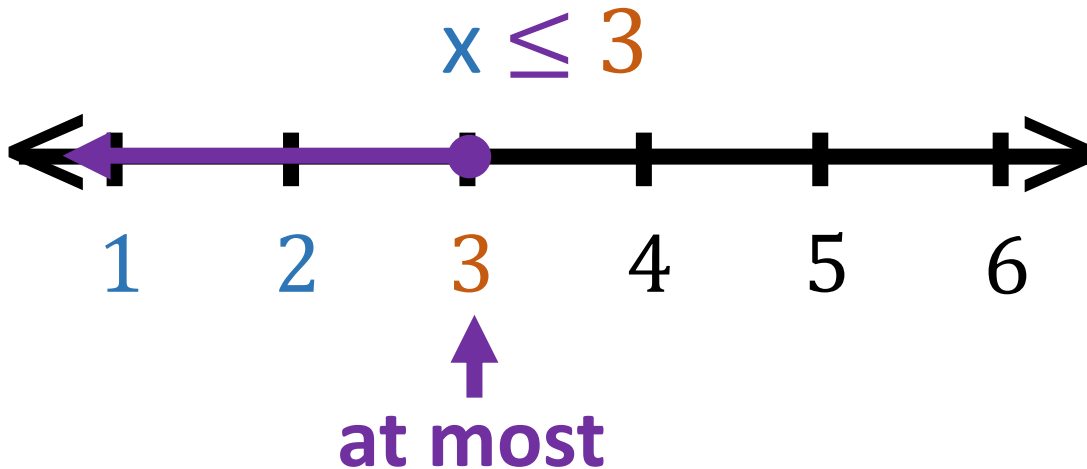
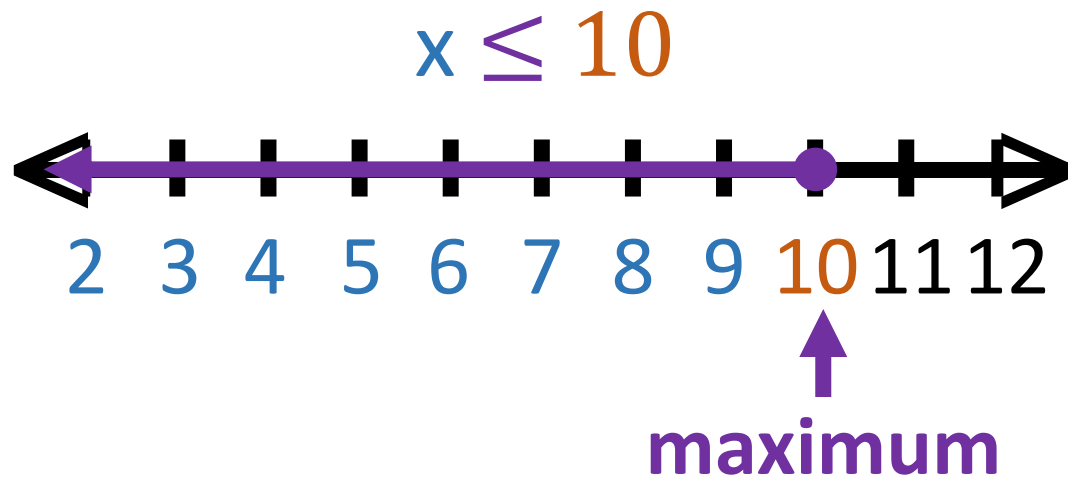
linear function/relationship



loan

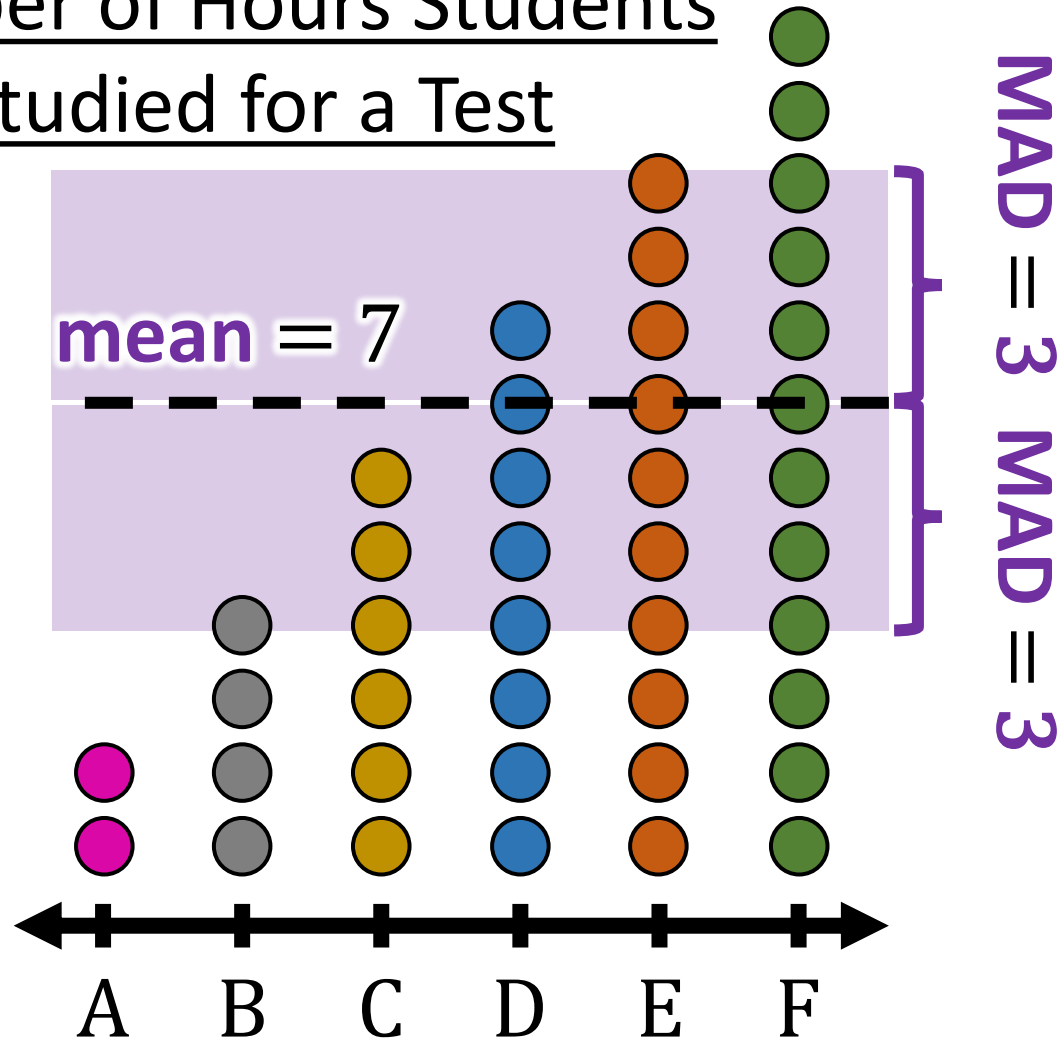


maximum/at most

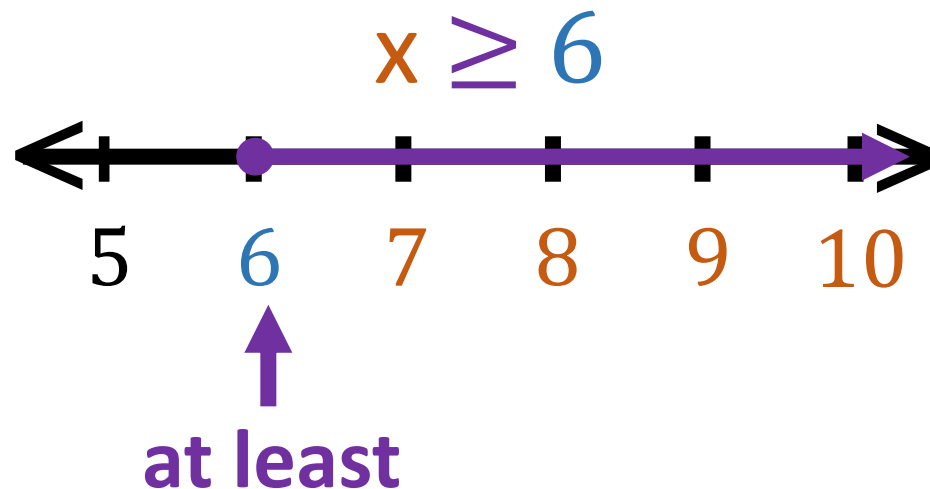
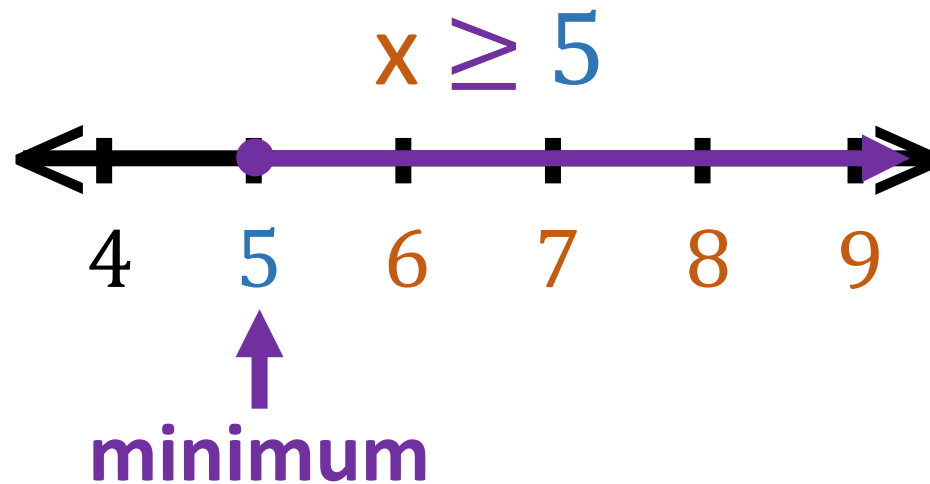


mean absolute deviation

Number of Hours Students
Studied for a Test



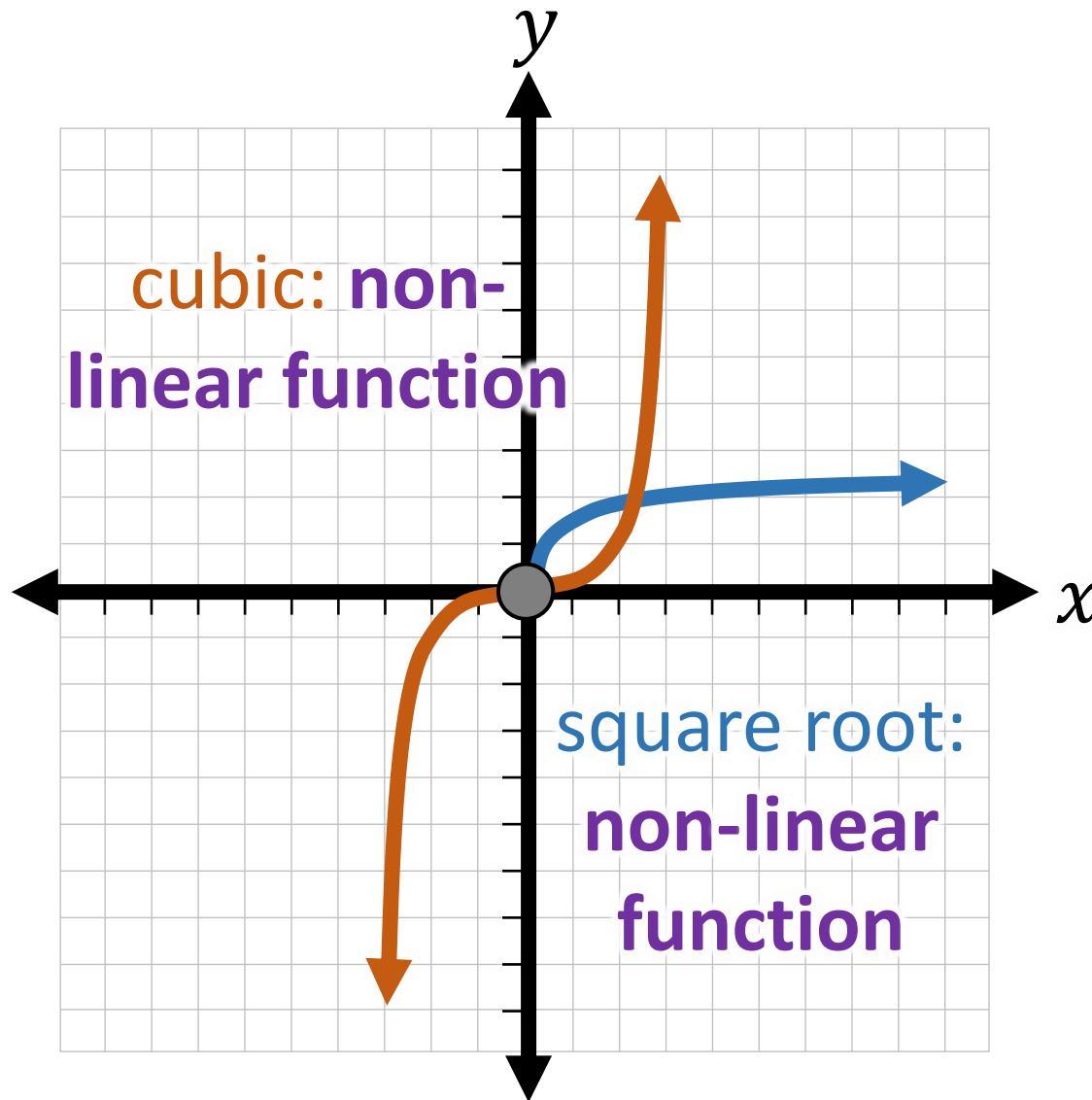
minimum/at least



no association

shoe size (x)	grade (y)	$y \div x = k$	no association
4	65	$65 \div 4 = 16.25$	
4.5	85	$85 \div 4.5 = 18.88$	
5	20	$20 \div 5 = 4$	
5	50	$50 \div 5 = 10$	

non-linear function/relationship



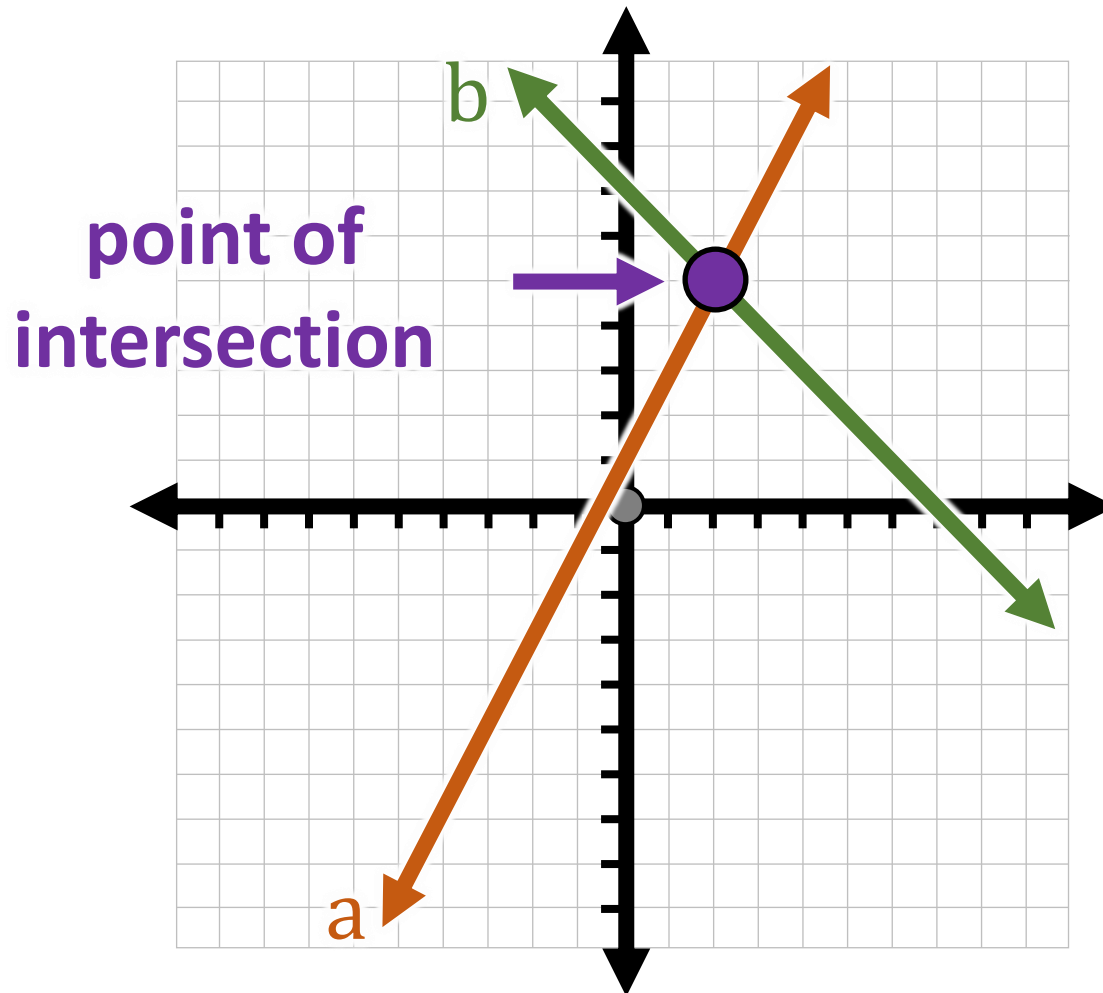
non-proportional situation/relationship

Pizzas (x)	Total Cost (y)	ratio ($y \div x$)
1	\$13	13.00
2	\$23	11.50
3	\$33	11.00
4	\$43	10.75
5	\$53	10.60

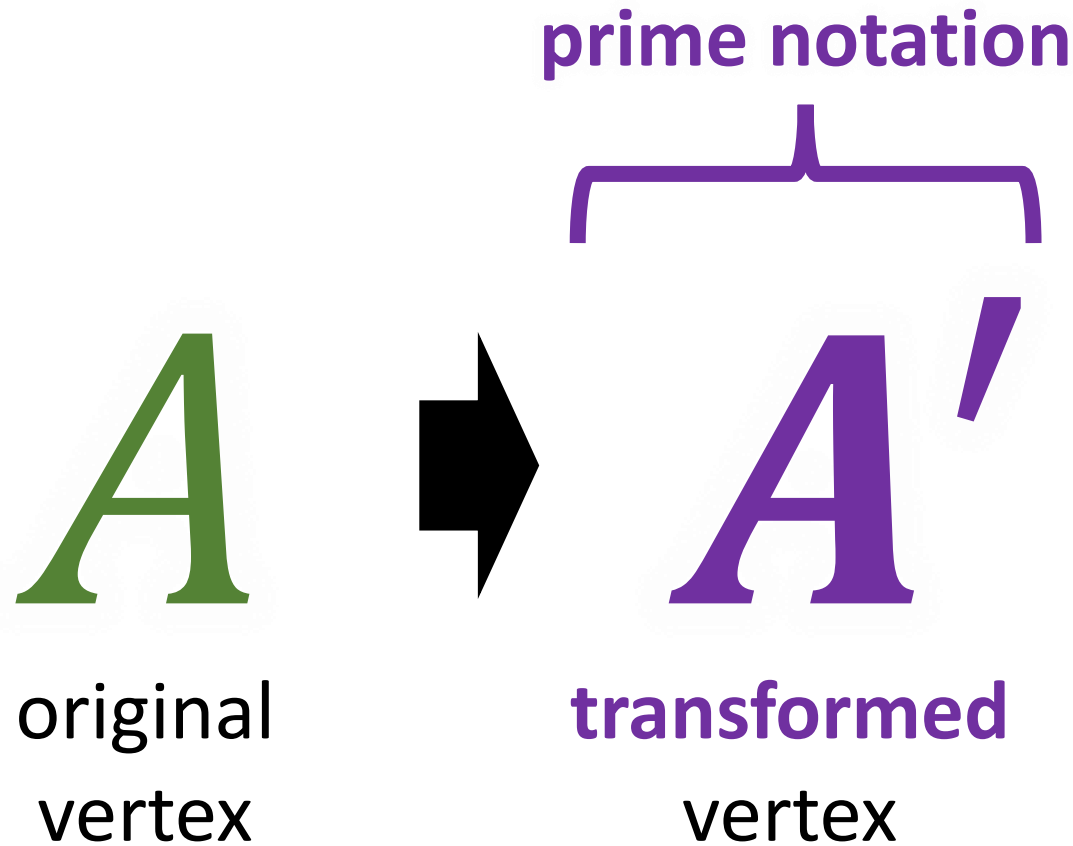
proportional

non-

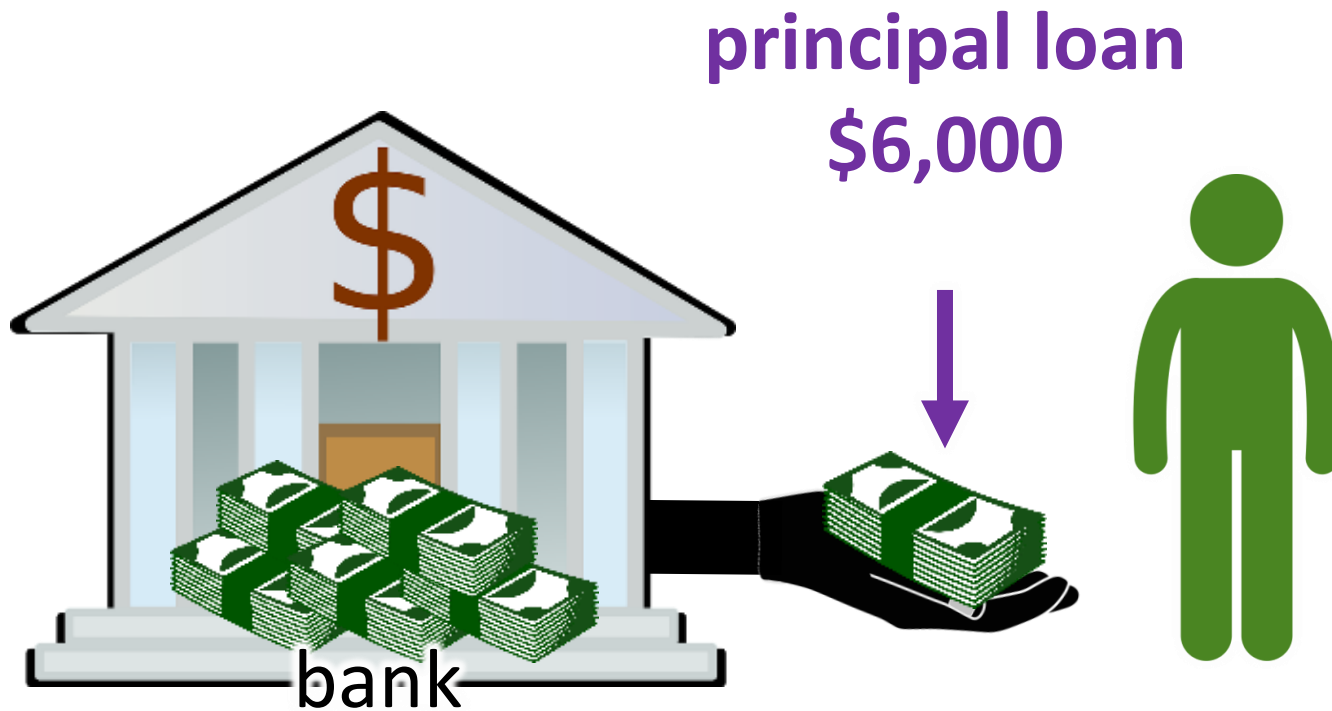
point of intersection




prime notation



principal



proportion

$$\frac{3}{5} = \frac{6}{10}$$


proportion: equivalent
fractions

proportional situation/relationship

Cupcakes per Pan		
trays (x)	cupcakes (y)	ratio ($y \div x$)
1	12	12
2	24	12
3	36	12
4	48	12
5	60	12

proportional

ratio

part-to-part **ratio** of cats to dogs

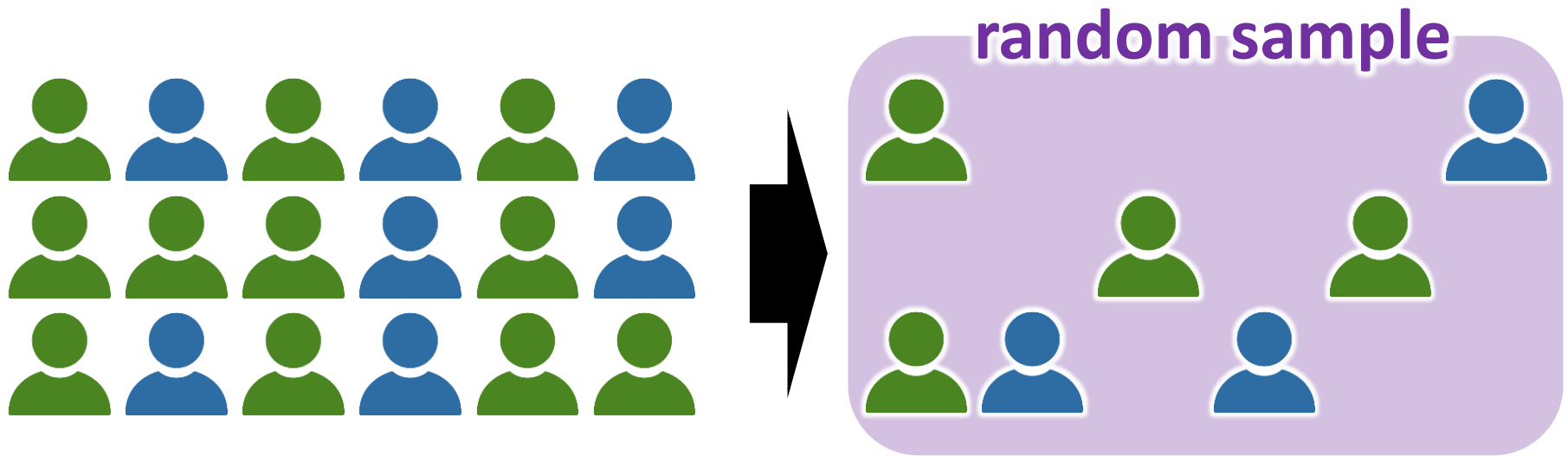


part #1: cats

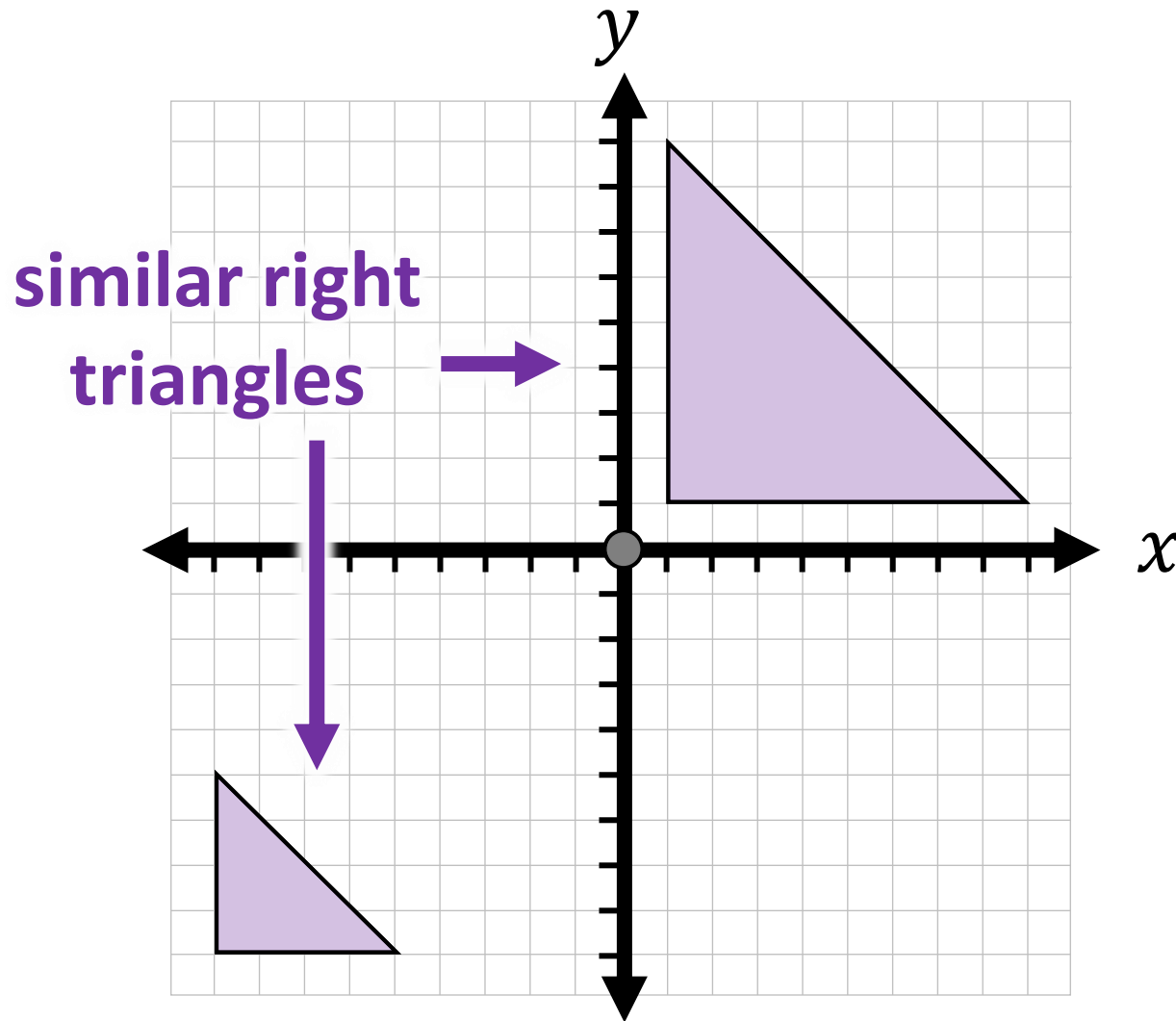
part #2: dogs

ratios { 1:4 1 to 4 1 cat to 4 dogs

random sampling



similar right triangle



simple interest

calculating **simple interest**

interest (I) = **principal (P)** × **rate (r)** × **time (t)**

$$I = \$6,000 \times 0.05 \times 3$$

$$I = \$900 \leftarrow \text{simple interest}$$

$$\text{total loan} = \$6,000 + \$900 = \$6,900$$

slope

$$m > 0$$






$$m < 0$$



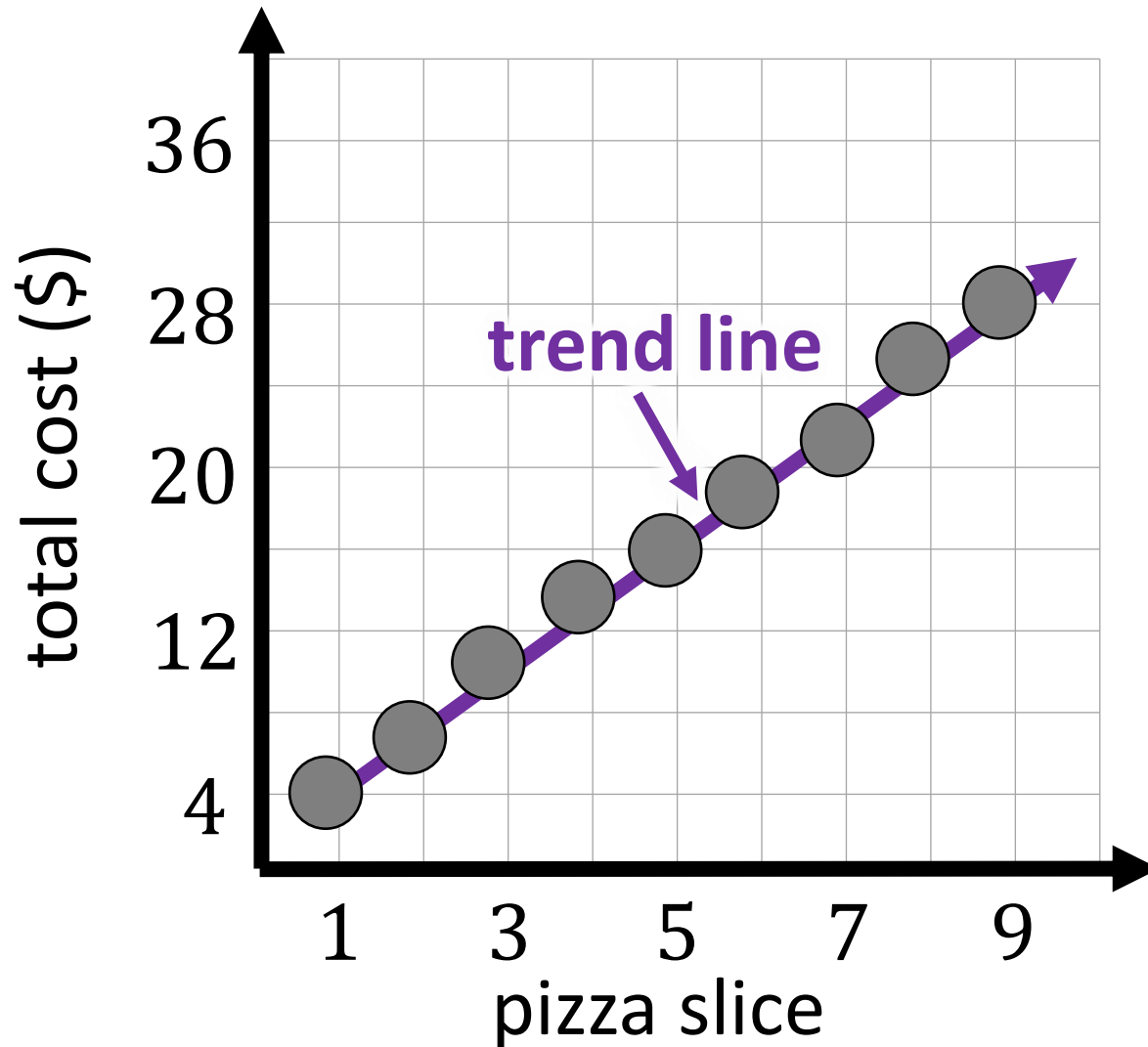
$$m = 0$$



time

time (year)	loan	interest	total owed
1	\$6,000	\$300	\$6,300 
2	↓	\$600	\$6,600 
3		\$900	\$6,900 

trend line



unit rate

apples (lb.)	cost (\$)
1	2
2	4
3	6
4	8

unit
rate 1:2



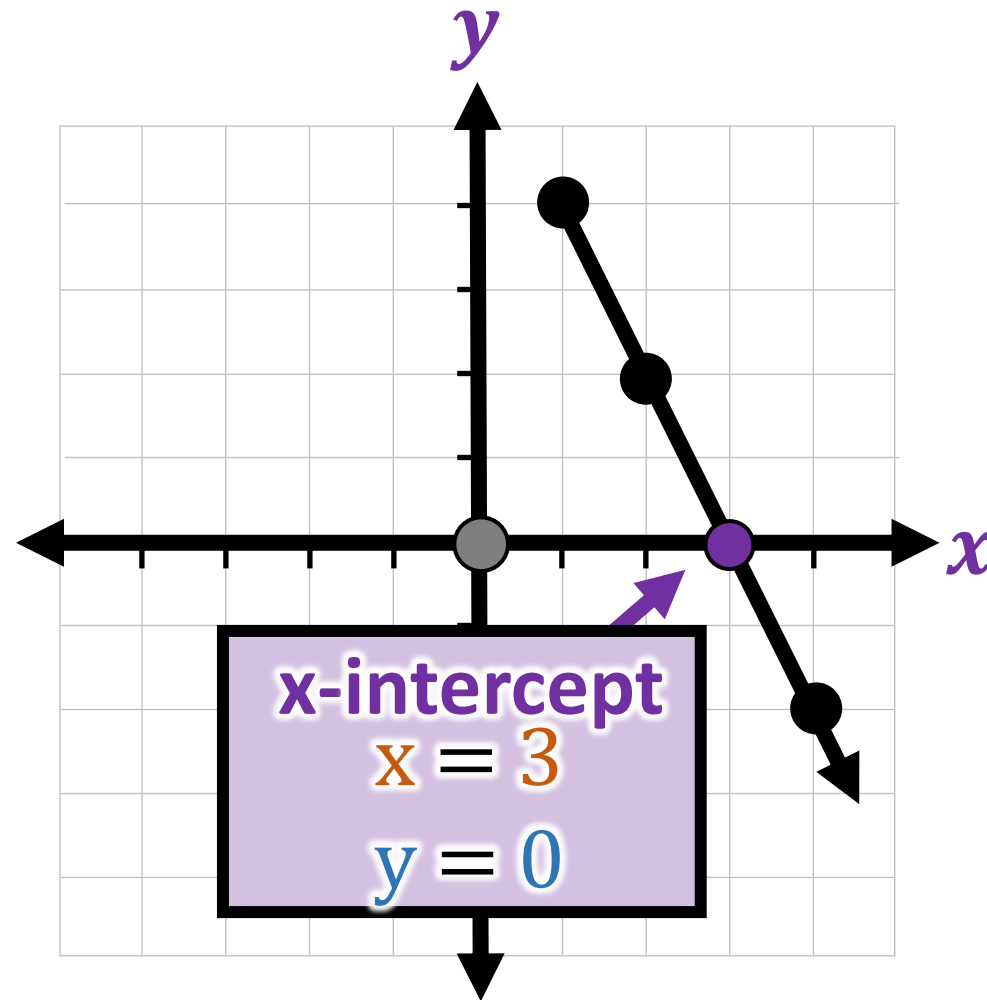
variable

$$2\mathbf{x} - 5 = 13$$



variable

x-intercept



y-intercept

