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Warm-Up

Match the following graphs with the contextual description that fits it best.

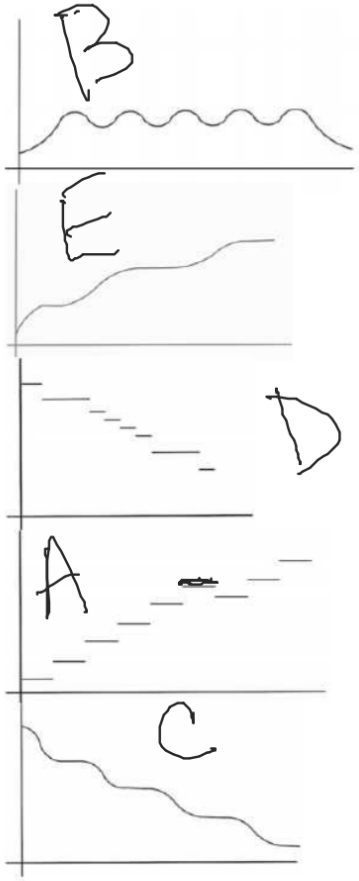
a. The amount of money in a savings account where regular deposits and some withdrawals are made.

b. The temperature of the oven on a day that mom bakes several batches of cookies

c. The amount of gasoline on hand at the gas station before a tanker truck delivers more.

d. Watermelons are delivered to a farmer's market every Saturday morning. The number of watermelons available for sale on Thursday.

e. The amount of mileage recorded on the odometer of a delivery truck over a time period.



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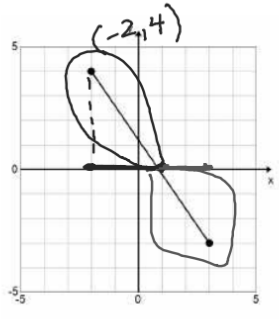
Positive: as x gets larger the y or outputs are positive

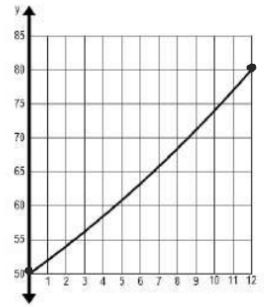
Negative: as x gets larger the y or outputs are negative

Ex. 1: For the following graphs, write an inequality for the values where the function is positive and negative.



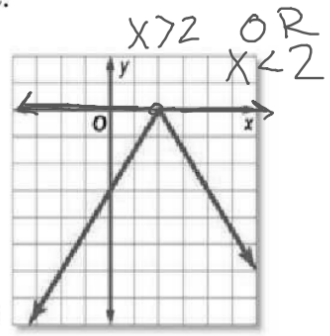
Positive: $-2 \leq x < 1$

Negative: $1 < x \leq 3$



Positive: ~~AKA~~ $0 < x \leq 12$

Negative: None



Positive: None

Negative: ~~AKA~~ ~~2 x 2~~ $x < 2$ ~~AND~~ OR $x > 2$

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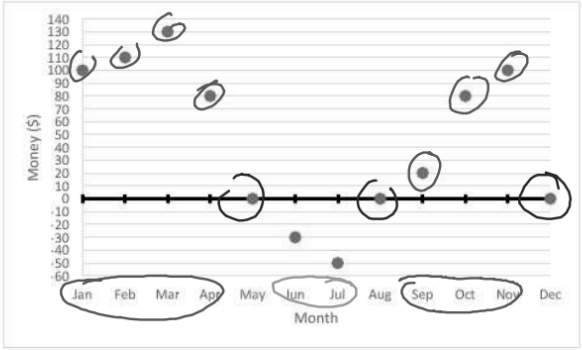
The following graph represents the amount of money in Johnathon's bank account each month after he has deposited or withdrew (took out) money. Use the graph to answer the following questions.



Johnathon has $0 in his account during which months?

During which monthes does he have a positive balance?

During which monthes does he have a negative balance?

Which monthes does he make a deposit?

In which monthes does he make a withdrawl?

What is the maximum amount in his account? During which month is that?

What is the minimum amount in his account? During which month is that?

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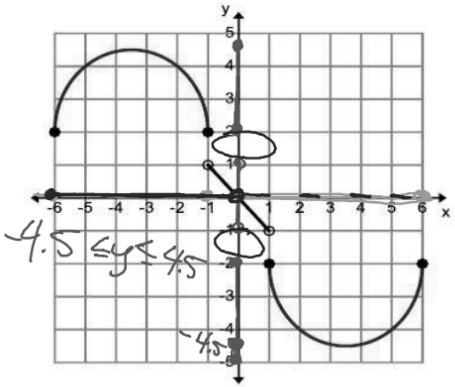
Use the graph below to answer the following questions.



What is the domain?

$-6 \leq x \leq +6$

What is the range?

$2 \leq y \leq 4.5$ $\quad -4.5 \leq y \leq -2$

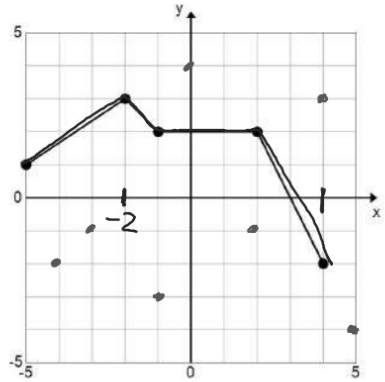
When is the graph positive? $-2 \leq y \leq 4.5$

$-6 \leq x < 0$

When is the graph negative?

$0 < x \leq 6$

Use the graph below to answer the following questions.



What is the maximum?

$y = 3$ $\quad (-2, 3)$

What is the minimum?

$y = -2$ $\quad (4, -2)$

When is the graph positive?

When is the graph negative?

Is this continuous or discrete?