

Assignment 4.1

Ana is about to graduate and her friend Gabi found the perfect graduation gift. The problem is that it costs \$360 and that is much more than she can spend. She decides to find some other friends to go in on the gift to lower the cost.

1. How much will each person spend if there are:

Two people?

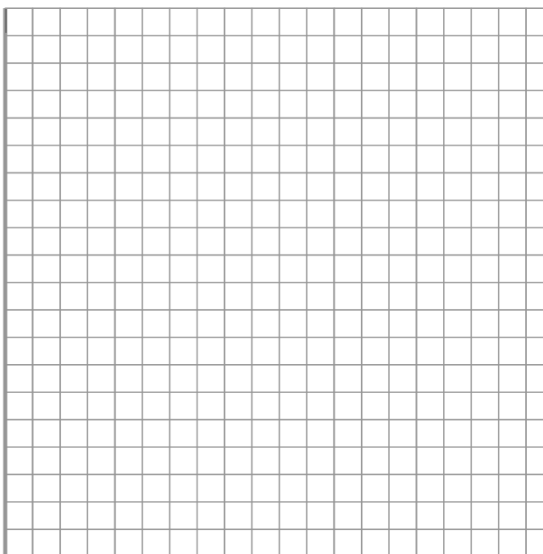
Five people?

Ten people?

One hundred people?

2. Write the equation that represents the situation. Define what both parts of the equation mean in the context of the situation.

3. Create a table and graph that represent the situation.

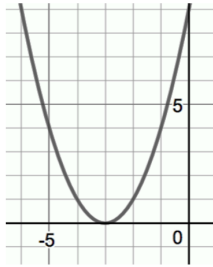


4. The cost per person is down to \$5 per person. How many people have agreed to contribute to the gift?

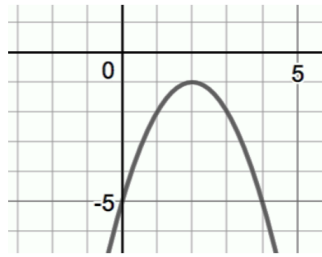
Refresh Your Memory

Describe the transformation of each graph, then write the equation in vertex form.

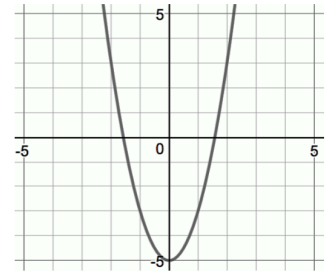
5.



6.



7.



8. Match the exponential function with correct graph (pay attention to transformations).

_____ $f(x) = 2^x$

_____ $f(x) = 2^x - 3$

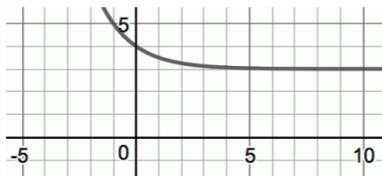
_____ $f(x) = 2^{x-3}$

_____ $f(x) = -(2^x) - 3$

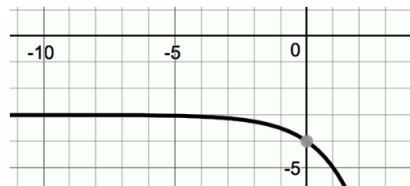
_____ $f(x) = 2^{(-x)} + 3$

_____ $f(x) = -2^{(-x)}$

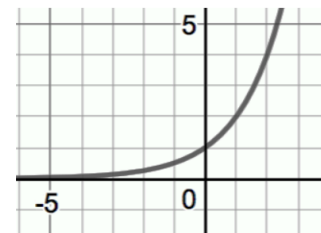
a.



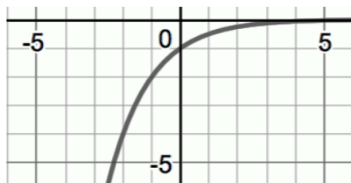
b.



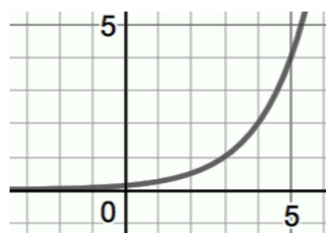
c.



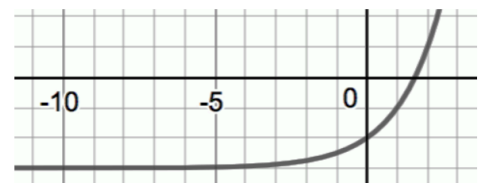
d.



e.



f.



9. Give the equation of each horizontal asymptote.

a.

b.

c.

d.

e.

f.