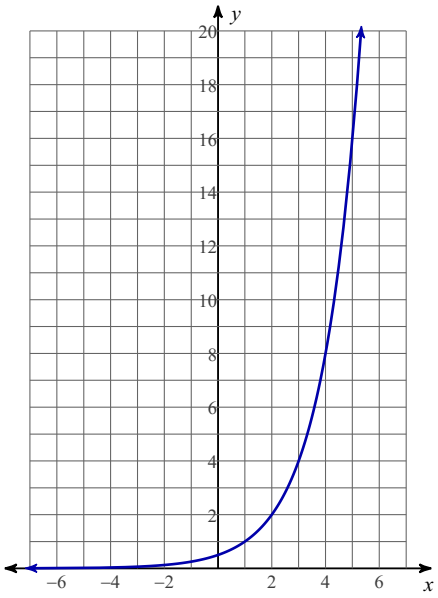
Algebra 1 Name_____

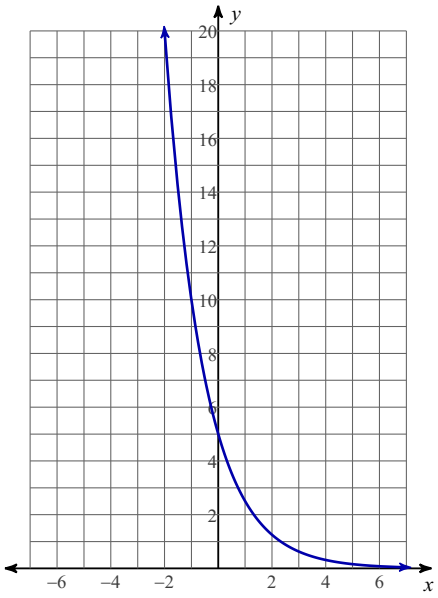
Lesson 2.2

Write an equation for each graph.

1)



2)



3) Let $f(x) = 2 \cdot 5^x$ and $g(x) = 5x + 2$. Create a table of values and a graph for each function.

4) As the input values (x) become larger, which function produces a larger output?

5) A sunflower is 6 inches tall and grows 2 inches every day.

a) Is the relationship linear or exponential?

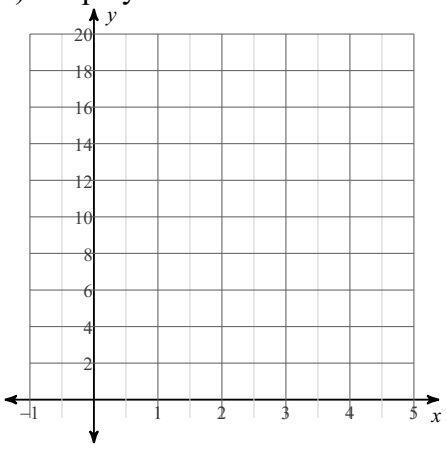
b) Is the relationship discrete or continuous?

c) Describe a reasonable domain for the function.

d) Write an appropriate function to describe the situation.

e) Explain what each part of your function represents.

f) Graph your function.



6) Bacteria have infected 3 square feet. The amount of area infected by the bacteria doubles every hour.

a) Is the relationship linear or exponential?

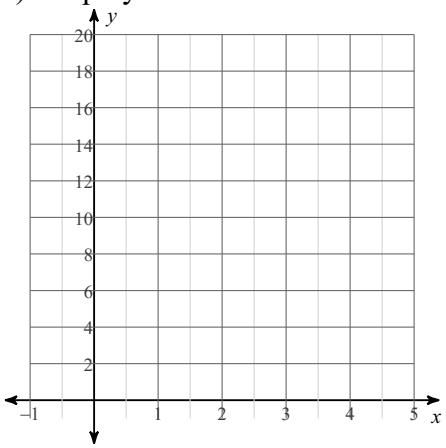
b) Is the relationship discrete or continuous?

c) Describe a reasonable domain for the function.

d) Write an appropriate function to describe the situation.

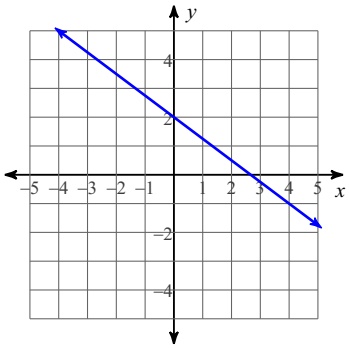
e) Explain what each part of your function represents.

f) Graph your function.

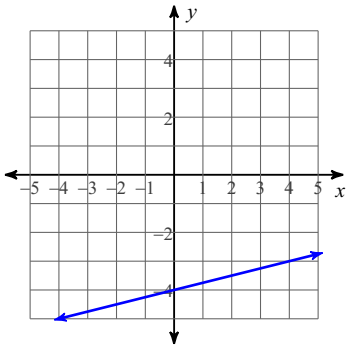


Write an equation for each graph.

7)



8)



9) Each garbage truck arriving adds about 2 tons of trash to a landfill that already has 20 tons of garbage.

a) Is the relationship linear or exponential?

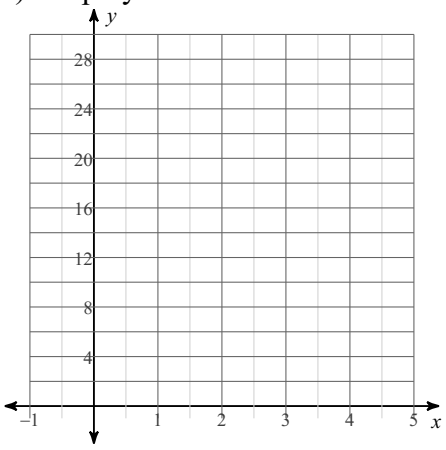
b) Is the relationship discrete or continuous?

c) Describe a reasonable domain for the function.

d) Write an appropriate function to describe the situation.

e) Explain what each part of your function represents.

f) Graph your function.



10) Every person I smile at also smiles and shares that smile with 2 other people who also smile. The pattern of sharing smiles continues. I smiled at four people today.

a) Is the relationship linear or exponential?

b) Is the relationship discrete or continuous?

c) Describe a reasonable domain for the function.

d) Write an appropriate function to describe the situation.

e) Explain what each part of your function represents.

f) Graph your function.