6.EE.9: Worksheet

Solutions

1. Define independent and dependent variable, and give an example of a relationship in which one variable is independent and another is dependent. An independent variable is a variable that can take any value, while a dependent variable is a variable whose value depends on the value of the independent variable. Examples will vary, but for instance, the number of students who can fit in a bus will depend on the number of seats in the bus.

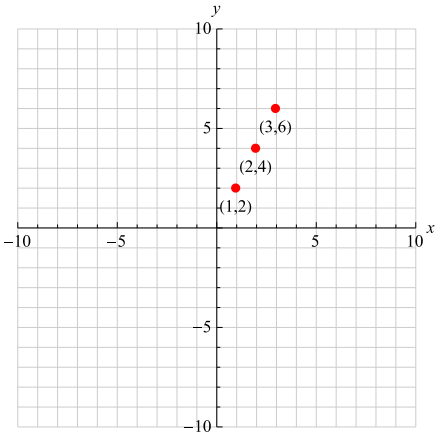
2. Anthony works as a ventriloquist at birthday parties, earning $25 per hour. Set up an equation to relate the number of hours Anthony works, h, to the total amount of money he earns, m. $m = 25h$

3. Write an equation for the number of years y expressed in terms of the number of days y. (Ignore leap years.) $y = \frac{1}{365}d$

4. Create a table of values for the relationship between x and y if $2x = y$. Answers may vary, but here's an example:

x	y
1	2
2	4
3	6

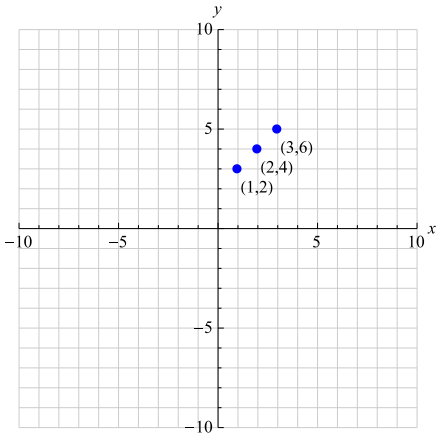
5. Given the table you found in the previous question, graph the points on the coordinate plane.



6. Create a table of values that describes the relationship between a and b if $b = a + 2$.

a	b
1	3
2	4
3	5

7. Given the table you found in the previous question, graph the points on the coordinate plane.



8. Jonathan's ultra-human-like robot downloads emotions at a speed of 2 gigabytes per second. Write an equation that expresses the relationship between the size of the emotion in gigabytes and how long that emotion will take to download. $t = \frac{1}{2}e$

9. A heart beats about 68 times per minute. Write an equation for the relationship between the number of heartbeats and the number of minutes that pass. $h = 68m$

10. Come up with a two quantities that have a relationship that can be expressed as a two-variable equation you've learned. Identify the dependent and independent variables, generate a table of values, and graph these ordered pairs on the coordinate plane. Answers may vary.