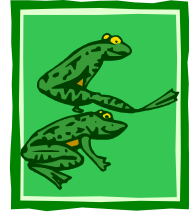# More Frog Tales

Part One: Patrick's frog Jumper was able to hop at an average rate of 4 centimeters per second. Create a table, equation, and graph for Patrick's frog. Show all the work done to answer the five questions below. Be prepared to explain your reasoning.

Time in seconds	Distance in centimeters
0	_____
10	_____
20	_____
30	_____
40	_____
50	_____
60	_____

equation:_____

1. If Jumper could continue at this rate, how far could Jumper travel in an hour?

 How far would this distance be in meters?

2. How long would it take Jumper to travel 300 centimeters?

3. Patrick decided to change Jumper's equation so that **t** represents time in minutes and **d** represented distance in meters. What equation did Patrick write?

4. Using Patrick's new equation, how long would it take Jumper to travel 12 meters?

5. Verify whether or not the relationship shown in the table is proportional.

Part Two: Dana's frog Cutie averaged 2 centimeters per second. Create a table, equation, and graph for Dana's frog. Graph Cutie's results on the same grid used for Jumper.

Time in seconds	Distance in centimeters
0	_____
10	_____
20	_____
30	_____
40	_____
50	_____
60	_____

equation:_____

Patrick realized that Dana's frog Cutie was never going to beat Jumper in a race. He wanted to give Cutie a head start to make the race more exciting. He decided to give Cutie a 50 cm head start. Create a new table, equation, and graph for Cutie with the head start.

Time in seconds	Distance in centimeters
0	_____
10	_____
20	_____
30	_____
40	_____
50	_____
60	_____

equation:_____

6. If the race lasts one minute, who will win? Prove your conclusion in at least two ways.

7. Did any graphs intersect?____ If so, what was the point of intersection and what did it mean?

8. Which of the equations for Cutie was NOT proportional?_____
Explain why it does not form a proportional relationship.