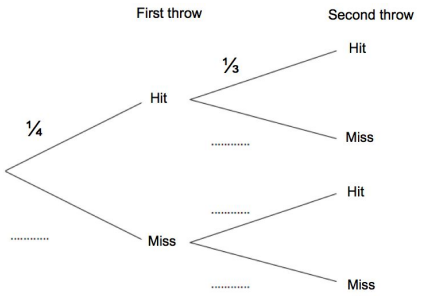
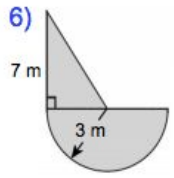
IM1 Problem Set 16		
Task 1	**Task 2**	**DC**
Put solutions to problems from the previous Problem Set on the board	Discuss all problems and come to a consensus. Record solutions in your notebooks and present solutions.	DC

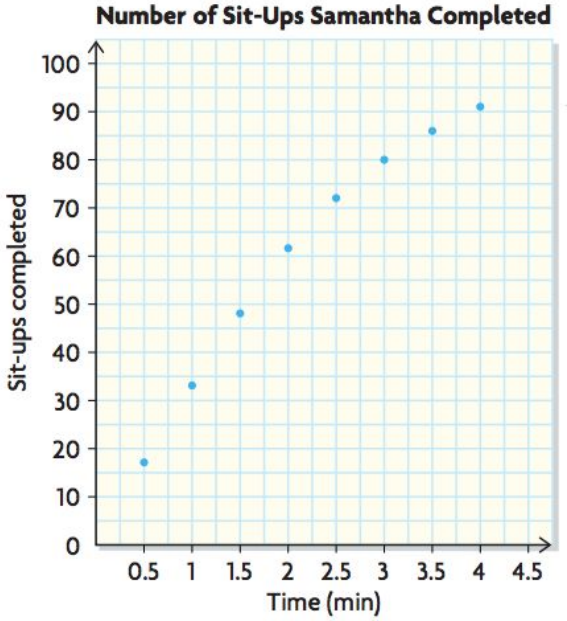
Problem Set - General Outline	
16.1	Solve the following equations: a. $2(x - 2) = 3x - 14$ b. $4(x - 2) = -3(2x + 6)$ c. $5 - 3(x - 1) = 4x + 13$
16.2	Jennifer is playing darts. She throws two darts aiming for a bullseye (the center). The probability Jennifer hits the Bullseye on her first throw is ¼ and the probability she hits the bullseye on her second throw ⅓. a. Complete the tree diagram. b. How probable is it that Jenny hits the bullseye twice? c. How probable is it that Jenny hits the bullseye at least once? 
16.3	Mr S. has a vegetable garden that has the shape and dimensions as shown in the diagram. In order to get his garden ready for the next growing season, he needs to know the area and perimeter of the garden. Determine the area and perimeter of this garden. 
16.4	Given the linear function $3x - 12y + 240 = 0$. Write the equation in the form of $y = mx + b$ and hence graph the line on your calculator. Determine the x- and y-intercepts of the line. State the slope of the line.
16.5	My son would like to know the relationship between the number of songs he downloads and the cost for these downloads. He knows that last month, he downloaded 54 songs and it cost him $26.90. This month, he downloaded 21 songs for a cost of $23.60. a. Determine a linear equation that shows the relationship between the number of song downloads and the costs. b. What do the slope and y-intercept of this equation mean?

16.6

The table below shows how many sit-ups Elek did in gym class.

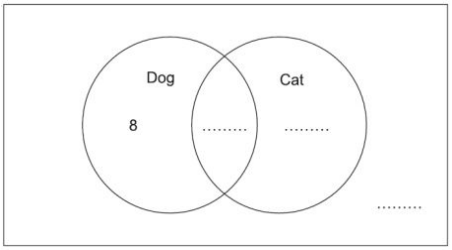
Time (min)	0.5	1	1.5	2	2.5	3	3.5	4
Sit-Ups Completed	17	33	48	62	72	80	86	91

a. Draw in the line of best fit and determine its equation.
b. Use the line of best fit to predict how many sit-ups Elek can do in 3.25 minutes?
c. How long would it take Elek to do 75 sit-ups?
d. Predict how many situps he can do in 5 minutes?
e. Now Olivia suggest that the relationship can be modelled with a curve, rather than a line. Draw in the curve of best fit and predict how many situps Elek can do in 5 minutes.



16.7

30 students are asked if they have a dog or cat. 21 have a dog. 16 have a cat. 8 have a dog, but not a cat.



a. Complete the Venn diagram.
b. How probable is it that a randomly student student has a dog?
c. How probable is it that a randomly selected student has both a dog and a cat?
d. How probable is it that a student has neither a dog nor a cat?

16.8	Biologists are studying the weight of Albacore tuna caught off of the coast of Washington State. A sample of tuna is taken and their weights, in pounds, are given below. 36, 22, 41, 18, 36, 27, 31, 38, 25, 29, 22, 34, 48, 20, 12, 19, 35, 32, 41, 50 a. Which is greater, the mean or median weight of these tuna? Justify your answer by showing numerical evidence. b. Construct a box-and-whiskers diagram of this data set on the number line given below. c. What is the range of this data set? d. What percent of this data set lies at or below a weight of 37 pounds?