| IM1 Problem Set 10 - Daily Tasks		
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 10	

10.1	Given the equation of the line $4x - 3y = 27$, determine:
	
	   a. The slope of this line.
	   b. The y-intercept of this line
	   c. The x-intercept of this line.
	   d. Is the point (3,-5) on the line?

10.2	Simplify: a. $\dfrac{4\left(ab^7\right)\left(a^3b^4\right)}{\left(2a\right)^2}$ b. $\dfrac{\left(m^3\right)^3\left(2x^2\right)^3}{2^5\left(4mx\right)^2}$

10.3	A line goes through the point (-2,1) and has a slope of $-\frac{3}{4}$.
	
	   a. Is the line going "uphill" or "downhill"? How do you know?
	   b. Graph the point on the graph paper attached.
	   c. Graph the line going through this point with the slope of $-\frac{3}{4}$.
	   d. Determine the equation of this line.

10.4	Aly has a bag in which he has 6 blue marbles and 4 white marbles. Samir has a box in which he has 150 blue marbles and 100 white marbles. Both students reach into their containers to take one marble out.
	
	   a. How likely is it that Samir selects a white marble?
	   b. Who has a higher chance at selecting a blue marble in his first attempt? Show/explain your reasoning.
	   c. Aly takes out one marble, records its colour and then puts it back into the bag. He then takes out a second marble and records its colour. How likely is it that Aly took out 2 blue marbles?

10.5	Find the area and perimeter of the following rectangles:
	9cm 3cm a. 6mm 8mm 6mm 10mm b.
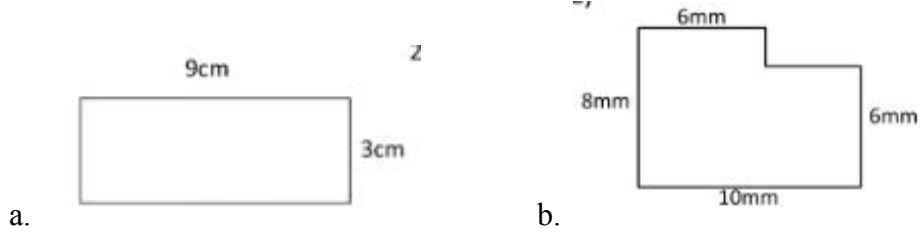
| 10.6 | Given the following graphs, determine (i) the slope of the line and then (ii) determine the equation of the line.

a.   b. |
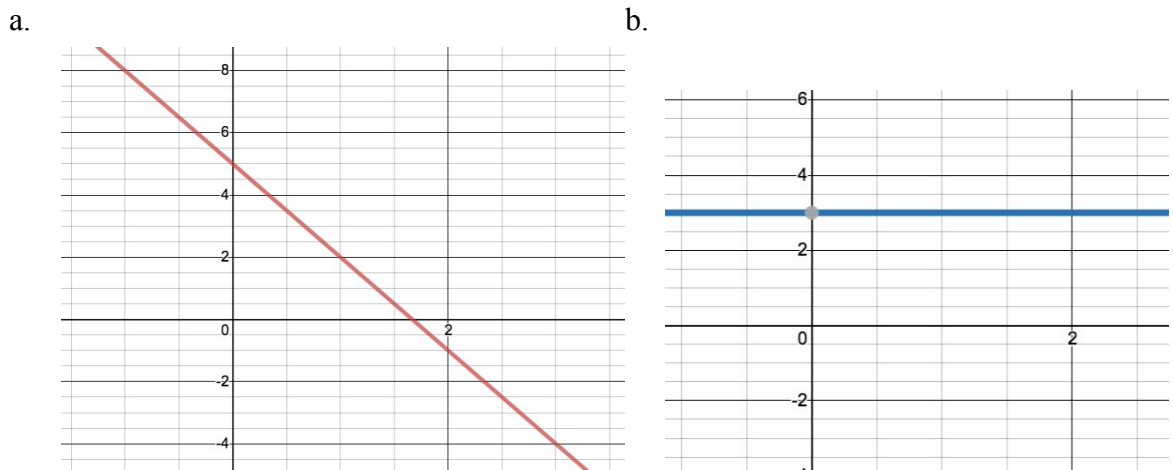
10.7	The table shows temperatures at various times of the day.

Time (p.m.)	2	3	4	5	6	7
Temperature (°C)	−1	2	2.5	4	6.5	9

a. Construct a scatter plot for the data in the table.
b. Sketch the line of best fit.
c. Determine an equation for the line of best fit.
d. Using your line of best fit or your equation, predict the temperature at 5:30 pm. Show/explain how you determined this value.
e. What does the slope of this linear relation mean?

10.8	A store sells packages of red pens and packages of blue pens. Red pens are sold only in packages of 6 pens. Blue pens are sold only in packages of 9 pens.
	a. Igor bought 5 packages of red pens and 3 packages of blue pens. How many pens did he buy altogether?
	b. Robin bought 369 pens. She bought 21 packages of red pens. How many packages of blue pens did she buy?
	c. Show/Explain why it is not possible for Susan to buy exactly 31 pens.