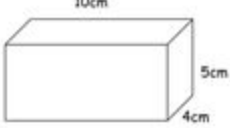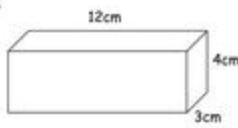| IM1 Problem Set 24		
Task 1	**Task 2**	**DC**
Put solutions to problems from the previous Problem Set on the board	Discuss all problems and come to a consensus. Record solutions in your notebooks and present solutions.	DC

Problem Set 24	
24.1	Given the following two points, find the slope of the segment joining the 2 points and the distance between the points and find the midpoint between the two points. a. P(6,-4) and Q(3,1) b. S(-4,3) and T(4,-2) c. U(5,1) and V(-2,9)

24.2	Two lines are parallel if their slopes are the same. Two lines are perpendicular if their slopes are negative reciprocals of each other. For the following pairs of lines, determine if the lines are parallel, perpendicular or neither.
	
	    a. $y = 2x + 5$ and $y = -\frac{1}{2}x - 4$
	    b. $x - 4y = 2$ and $2x - 8y = 3$
	    c. $x - 5y + 8 = 0$ and $5x - 2y = 1$

24.3	Does each pair of lines intersect at the given point?
	
	    a. (2, 3) for the lines $y = x + 1$ and $y = 4x - 5$
	    b. (1, -1) for the lines $y = 5x - 4$ and $y = 2x - 3$
	    c. (0, 2) for the lines $y = 3x + 2$ and $y = 5x - 1$
	    d. (-1, -3) for the lines $y = 4x + 1$ and $y = x - 5$

24.4	Determine the volume and surface area of the following cuboids: 1. 10cm, 5cm, 4cm 2. 12cm, 4cm, 3cm

24.5	Determine the point at which the following pairs of lines intersect:
	
	    a. $y = 4x - 9$ and $y = x - 3$
	    b. $y = -3x + 4$ and $y = 3x - 2$

24.6	Rearrange each equation to solve for the variable indicated:
	
	    a. $2a - 5b = 12$; solve for a
	    b. $0.35m + 2.4n = 9$; solve for n
	    c. $P = 2L + 2W$; solve for L

24.7	Hannah is doing a probability experiment. She has a bag containing 12 cubes, 5 of which are blue and 4 of which are yellow and 3 of which are red. She will be taking one cube out, recording its color and then taking out a second cube and recording its color.
	
	    a. Draw a tree diagram, showing all the possible options for the colors of the cubes from these 2 draws.
	    b. How probable is it that Hannah selects 2 blue cubes?
	    c. How probable is it that Hannah selects a blue and a red cube?
	    d. How probable is it that Hannah does NOT select a yellow cube?

24.8	Here are the exam scores from 2 IM2 classes. Use your calculator to determine the mean and the quartiles. Then decide which class did "better" and explain your reasoning.

E block class	F block class
42, 47, 61, 63, 75, 75, 76, 81, 84, 85, 87, 88, 91, 92, 97, 100	65, 66, 68, 70, 73, 74, 75, 75, 80, 81, 82, 83, 85, 88, 89, 92