FOLLOW INSTRUCTIONS AND <u>SHOW ALL NECESSARY WORK</u> AS IT IS WORTH A SIGNIFICANT PERCENTAGE OF YOUR MARK.

1.   Using factor trees, write each of the following as a product of its prime factors. **(2)**

   a)   168   b)   6 125

2.   Find the Greatest Common Factor (GCF) of each set of numbers. **(8)**

   a)   40 ; 48 ; 56   b)   120 ; 960 ; 1 400
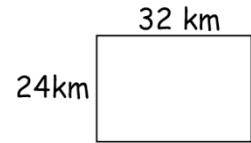
3.   Find the Least Common Multiple (LCM) of each set of numbers. **(8)**

   a)   12 ; 15 ; 21   b)   49 ; 56 ; 64

4.   A developer wants to subdivide the rectangular plot of land below into congruent SQUARE plots.

    a)   What is the side length of the LARGEST possible square plot? **(3)**

32 km

24km

        ANSWER: Side length of square = _____ km

    b)   How many congruent square plots will the developer have on his land? **(1)**

5.   Determine whether each number in the chart below is a perfect square, a perfect cube or neither. Calculate and record the answer then check off the appropriate boxes in the chart. **(6)**

	PERFECT SQUARE	PERFECT CUBE	NEITHER
225			
729			
1 444			
1 944			
4 096			
13 824			

6.   Determine the side length of the SQUARE to the right. Show your work! **(2)**

Area = 1764 yd.^{2}
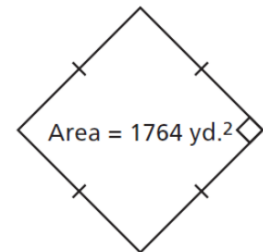
7.   Determine the edge length of the CUBE to the right. Show your work! **(2)**

Volume
= 15 625 ft.^{3}

☺   **GOOD LUCK!**   ☺