**The National Orthodox School /Shmaisani**

**Subject: Science/ Physics**

**Name: Title: Pressure Worksheet**

**Date: Grade-Section: 8- ……CS**

Question 1) A block of weight 850N has a length of 0.5m and a width of 0.4 m and a height of 0.3m.

1. Find the smallest pressure that this block exerts on the ground.

Area = L \* W

Area (1)= 0.5 m \* 0.4 m= 0.2 m² ( the largest)

Area (2): 0.5 m \*0.3 m = 0.15 m²

Area (3) : 0.4 m \*0.3 m = 0.12 m² ( the smallest)

P= F/A

= 850 N/ 0.2 m² = 4250 N/m²

( the smallest pressure means

 the largest area)

1. Find the largest pressure that this block exerts on the ground.

The largest pressure means the smallest Area (0.12 m²)

P = F/A

= 850 N / 0.12 m² = 7083.3 N/m²

Question 2) The force applied to a 0.4 cm by 0.8 cm brake pad produces a pressure of 500 N/cm². Calculate the force applied to the brake pad.

P= F/A Area = L\*W = 0.4cm \* 0.8 cm = 0.32 cm²

 500 N/cm² = F / 0.32 cm²

F = 500 \* 0.32 = 160 N