**The National Orthodox School /Shmaisani**

**Subject: Science/ Physics**

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**Date: 9/16/2022 Grade-Section: 8- …D…CS**

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

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

Smallest pressure is weight divided by largest area

P=F/A P=850N/(0.5mx0.4m) = 850/0.2 = 4250N/m2 = **4250 Pa**

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

Largest pressure is weight divided by smallest area

P=F/A P=850N/(0.4mx0.3m) = 850/0.12 = 7083N/m2 = **7083 Pa**

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.

F = P x A

F= 500 x (0.4 x 0.8) = 500 x 0.32 = 160 N