**The National Orthodox School /Shmaisani**

**Subject: Science/ Physics**

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**Date:** 18/9/2022 **Grade-Section: 8- G 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.

P= F/A

P= 850 N/0.5 m\*0.4 m

= 850 N/0.2 m

=4250 N/m2

In order to get the smallest pressure, you calculate the largest possible area.

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

P= F/A

P= 850 N/0.4 m\*0.3 m

= 850 N/0.12 m2

=7083.33 N/m2

In order to get the largest pressure, you calculate the smallest possible area.

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= 500 N/cm2

A= 0.4 cm\*0.8 cm= 0.32 cm2

F= P\*A= 500 N/cm2 \* 0.32 cm2

= 160N