

Question number	Answer	Notes	Marks
4 (a) (i)	pressure = force ÷ area;	allow rearrangements and standard symbols e.g. $p = F \div A$	1
(ii)	calculation of total weight; substitution and rearrangement; evaluation;  e.g. $0.432 (= 0.072 \times 6)$ (area =) $0.432 / 820$ (area =) $0.00053 \text{ (m}^2\text{)}$	$(0.072 \times 6) / 820$ $0.00052683 \text{ (m}^2\text{)}$ $5.2683 \times 10^{-4} \text{ (m}^2\text{)}$ allow $0.0005 \text{ (m}^2\text{)}$ $0.0000878 \text{ (m}^2\text{)}$ gains 2 marks POT error loses a mark	3
(b) (i)	pressure decreases;  (because) area (in contact with table) increases / weight (over the same area) decreases;	accept quantitative method	2
(ii)	density remains constant; (because) mass of squares AND volume of squares is the same;	density not affected allow because the material is the same	2

**Total for question 4 = 8 marks**