

Pressure, Force and Area Mark Scheme		
1	$\frac{2000N}{5 Nm^{-2}}$	[1] Area = Force \div Pressure
	$= 400 m^2$	[1] Correct answer with units
2	$Area = 0.4 \times 0.8 = 0.32 m^2$	[1] Finding area of break pad
	$500 \times 0.32 = 160N$	[1] Force = Pressure \times Area
3	$\frac{10000}{2} = 5000 Ncm^{-2}$	[1] Pressure= Force \div Area
4	$101Nm^{-2} = 0.0101Ncm^{-2}$	[1] $1 Nm^{-2} = 0.0001Ncm^{-2}$
5	$Area = 0.5 \times 3 = 1.5 m^2$	[1] Finding area of crate
	$\frac{10000}{1.5} = 6670 Nm^{-2}$	[1] Correct pressure to 3 s.f.
6	$\frac{0.5}{0.0000001}$	[1] Pressure= Force \div Area
	$= 5 \times 10^6 Nm^{-2}$	[1] Correct answer with units
7	$\frac{0.1}{400}$	[1] Area = Force \div Pressure
	$= 2.5 \times 10^{-4}m^2$	[1] Correct answer with units
8	$Area = \pi \times 0.5^2 = 0.25\pi m^2$	[1] Finding area of cylinder
	$\frac{2}{0.25\pi} = 2.55 Nm^{-2}$	[1] Pressure= Force \div Area

END