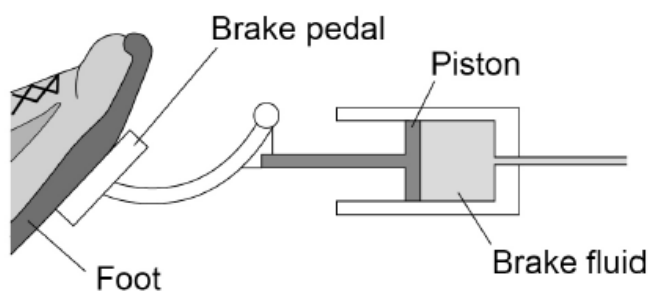


Pressure and pressure difference in fluids – GCSE Physics Paper 2

1. No.8(8.5_8.6)

Figure 19 shows part of the braking system for a car.

Figure 19

0 8 . 5

Which equation links area of a surface (A), the force normal to that surface (F) and pressure (p)?**[1 mark]**Tick (✓) **one** box.

$p = F \times A$

☐

$p = F \times A^2$

☐

$p = \frac{F}{A}$

☐

$p = \frac{A}{F}$

☐

0	8	.	6
---	---	---	---

When the brake pedal is pressed, a force of 60 N is applied to the piston.

The pressure in the brake fluid is 120 000 Pa.

Calculate the surface area of the piston.

Give your answer in standard form.

Give the unit.

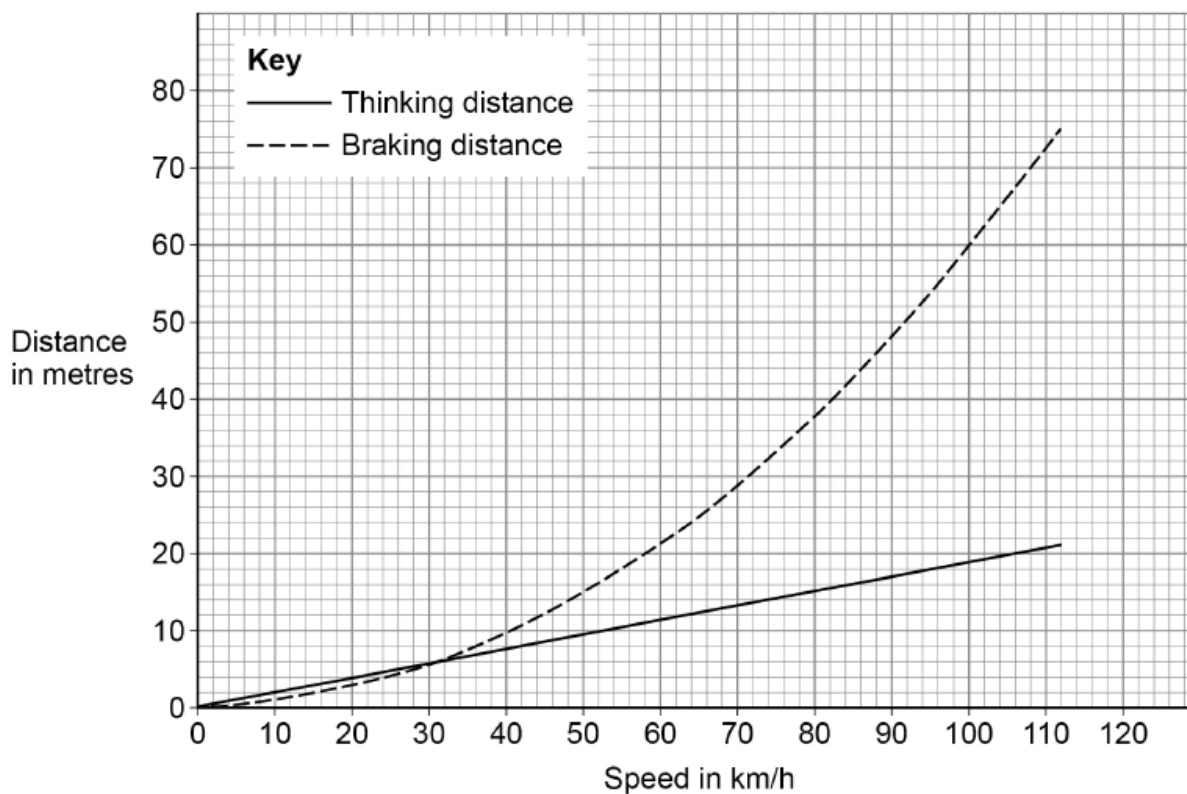
[5 marks]

Surface area (in standard form) = _____ Unit _____

2. No.1(1.4_1.6)

0 1 . 4

Figure 1 shows how the thinking distance and braking distance for a car vary with the speed of the car.

Figure 1

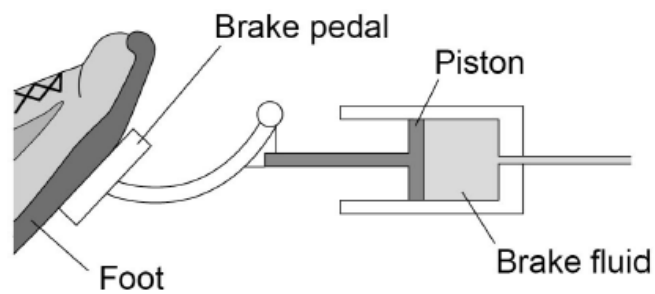
Determine the stopping distance when the car is travelling at 80 km/h.

[2 marks]

Stopping distance = _____ m

Figure 2 shows part of the braking system for a car.

Figure 2



0 1 . 5

Which equation links area of a surface (A), the force normal to that surface (F) and pressure (p).

[1 mark]

Tick (✓) **one** box.

$p = F \times A$

☐

$p = F \times A^2$

☐

$p = \frac{F}{A}$

☐

$p = \frac{A}{F}$

☐

0 1 . 6

When the brake pedal is pressed, a force of 60 N is applied to the piston.

The pressure in the brake fluid is 120 000 Pa.

Calculate the surface area of the piston.

Give your answer in standard form.

Give the unit.

[5 marks]

Surface area (in standard form) = _____ Unit _____