Name: _____

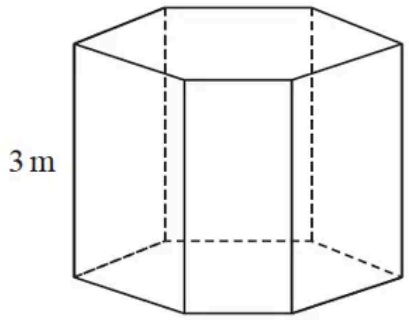
GCSE (1 - 9) Pressure	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2020, Paper 1F, Q27 Edexcel, GCSE, Autumn 2020, Paper 1H, Q8
2	Edexcel, GCSE, Summer 2018, Paper 2F, Q25 Edexcel, GCSE, Summer 2018, Paper 2H, Q6
3	Edexcel, GCSE, Summer 2023, Paper 1F, Q27
4	Edexcel, GCSE, November 2022, Paper 1F, Q25

1

The diagram shows a prism placed on a horizontal floor.



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The prism has height 3 m
The volume of the prism is 18 m^3

The pressure on the floor due to the prism is 75 newtons/m^2

Work out the force exerted by the prism on the floor.

..... newtons

(Total for Question 8 is 3 marks)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q27
Edexcel, GCSE, Autumn 2020, Paper 1H, Q8]

2

A force of 70 newtons acts on an area of 20 cm^2

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The force is increased by 10 newtons.
The area is increased by 10 cm^2

Helen says,

"The pressure decreases by less than 20%"

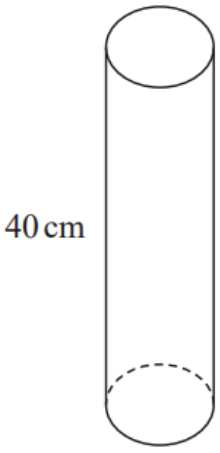
Is Helen correct?
You must show how you get your answer.

(Total for Question 6 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q25
Edexcel, GCSE, Summer 2018, Paper 2H, Q6]

3

The diagram shows a solid cylinder on a horizontal floor.



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The cylinder has a

volume of $1200\,\text{cm}^3$
height of 40 cm.

The cylinder exerts a force of 90 newtons on the floor.

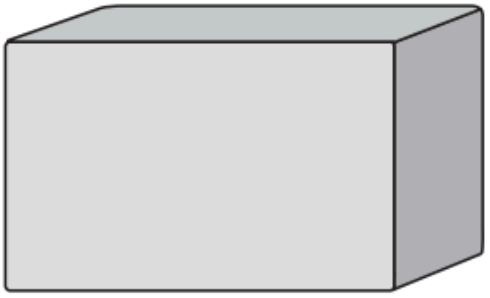
Work out the pressure on the floor due to the cylinder.

..... newtons/cm^2

(Total for Question 27 is 3 marks)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q27]

4



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

A storage tank exerts a force of 10 000 newtons on the ground.

The base of the tank in contact with the ground is a 4 m by 2 m rectangle.

Work out the pressure on the ground due to the tank.

..... newtons / m^2

(Total for Question 25 is 2 marks)

[Edexcel, GCSE, November 2022, Paper 1F, Q25]