**Pressure, Force and Area GREEN**

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| Draw and describe an object that is designed to decrease pressure. |  | Draw and describe an object that is designed to increase pressure. |  |
| Description: | | Description: | |

1. A hammer hits a nail with a force of 50 N into some wood. The area of the point of the nail is 0.02 cm². What is the pressure the nail puts on the wood?

2. A girl has a weight of 450 N and her feet have a total area of 300 cm². Calculate the pressure her feet put on the ground.

3. A woman weighs 650 N and wears high heels with a total area of 52 cm². What is the pressure on the floor?

4. An elephant puts a force of 36 000 N on its four feet, which each have an area of 1800 cm². What is the pressure it exerts on the ground?

5. A student uses a glue stick with an area of 4 cm², putting a pressure of 0.5 N/cm² on her book. Calculate the force she puts on the glue stick.

6. Calculate the area of a dart which hits the dartboard with a force of 10 N and pressure of 2000 N/cm².

**Pressure, Force and Area AMBER**

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| Draw and describe an object that is designed to decrease pressure. |  | Draw and describe an object that is designed to increase pressure. |  |
| Description:  Greater area decreases pressure | | Description: | |

1. A hammer hits a nail with a force of 50 N into some wood. The area of the point of the nail is 0.02 cm². What is the pressure the nail puts on the wood?

Pressure = force ÷ area =

2. A girl has a weight of 450 N and her feet have a total area of 300 cm². Calculate the pressure her feet put on the ground.

3. A woman weighs 650 N and wears high heels with a total area of 52 cm². What is the pressure on the floor?

4. An elephant puts a force of 36 000 N on its four feet, which **each have an area** of 1800 cm². What is the pressure it exerts on the ground?

5. A student uses a glue stick with an area of 4 cm², putting a pressure of 0.5 N/cm² on her book. Calculate the force she puts on the glue stick.

6. Calculate the area of a dart which hits the dartboard with a force of 10 N and pressure of 2000 N/cm².

**Pressure, Force and Area RED**

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| Draw and describe an object that is designed to decrease pressure. |  | Draw and describe an object that is designed to increase pressure. |  |
| Description:  Greater area decreases pressure  (Think about the pictures on the PowerPoint!) | | Description:  Smaller area increases pressure | |

1. A hammer hits a nail with a force of 50 N into some wood. The area of the point of the nail is 0.02 cm². What is the pressure the nail puts on the wood?

Pressure = force ÷ area = 50 ÷ 0.02 =

2. A girl has a weight of 450 N and her feet have a total area of 300 cm². Calculate the pressure her feet put on the ground.

Pressure = force ÷ area =

3. A woman weighs 650 N and wears high heels with a total area of 52 cm². What is the pressure on the floor?

4. An elephant puts a force of 36 000 N on its four feet, which **each have an area** of 1800 cm². What is the pressure it exerts on the ground?

5. A student uses a glue stick with an area of 4 cm², putting a pressure of 0.5 N/cm² on her book. Calculate the force she puts on the glue stick.

Force = pressure x area =

6. Calculate the area of a dart which hits the dartboard with a force of 10 N and pressure of 2000 N/cm².

Area = force ÷ pressure =