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Pressure Mat Worksheet

1. Define the terms *force* and *pressure*.

2. Explain the science involved in the Pressure Mat demonstration using terms such as force, pressure, and atmospheric pressure.

3. Circle the correct answer.

- a. Increasing the surface area for a given force *increases/decreases* the pressure.
- b. Increasing the force on a given surface area *increases/decreases* the pressure.

c. When worn by the same person, the heel of a high-heeled shoe will produce *greater/smaller* pressure compared to the heel of a running shoe.

d. A 10-lb, rectangular brick standing vertically on its end produces *greater/smaller* pressure compared to the same brick lying horizontally on its long side.

e. Which force produces the greatest pressure: 10 pounds on a 100 in² surface, or 1 pound on a 1 in² surface? *10 pounds/1 pound.*

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