

# Proportions and Planetary Science

Name: \_\_\_\_\_

**Directions:** Your teacher will ask you to log on to NASA's **National Space Science Data Center** fact sheet at <http://nssdc.gsfc.nasa.gov/planetary/factsheet/index.html>. Use the fact sheet and a calculator to answer the following questions.

1. Gravity of the Earth: \_\_\_\_\_/m<sup>2</sup>

Gravity of the Moon: \_\_\_\_\_/m<sup>2</sup>

Use the gravity facts in a proportion that would help you calculate the weight of a 150-pound person on the Moon: \_\_\_\_\_

\_\_\_\_\_

Solve the proportion you wrote above and write the answer: \_\_\_\_\_ pounds.

2. Calculate the weight of a 150-pound person on Mars and on Jupiter to the nearest tenth:

Mars: \_\_\_\_\_

Jupiter: \_\_\_\_\_

3. Using the NSSDC fact sheet, list those planets that have a diameter smaller than the Earth and those larger:

Smaller: \_\_\_\_\_

Larger: \_\_\_\_\_

4. Using the NSSDC data on planet diameter size, determine if gravity and diameter have a direct relationship. Answer Yes or No, and give a reason for your answer. \_\_\_\_\_

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