

Gravity Myths vs. Facts Answer Key

1. **M** – There is gravity in space; it's just weaker or different depending on distance from massive objects.
2. **F** – True; gravity keeps the Moon orbiting Earth.
3. **M** – Gravity varies with mass and distance, so it's not the same everywhere.
4. **F** – True; gravitational force decreases with distance from Earth's center.
5. **M** – Astronauts float because they are in constant free fall, not because gravity is absent.
6. **F** – True; this is called gravitational lensing.
7. **F** – True; without air resistance, all objects fall at the same rate in a vacuum.
8. **F** – True; gravity acts over long distances.
9. **M** – Gravity pulls toward the center of mass, not just "downward" as we experience on Earth.
10. **F** – True; your mass stays the same, but your weight changes with gravity.
11. **F** – True; gravity results from the attraction between masses.
12. **F** – True; this is one defining feature of black holes.