

Name:	ID:	Circle Gender & Grade: Male or Female 6 7 8 9 10 11 12
Teacher:	Class Period:	Subject: Date:

Granny on the Ramp: Exploring Forces and Motion
Pre/Post Test – MS – ANSWER SHEET

For each item, carefully color in the circle with the letter that corresponds to the answer you choose.

- | | | | | | | | |
|----|-------------------------|-------------------------|-------------------------|-----|-------------------------|-------------------------|-------------------------|
| 1. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 8. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 2. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 9. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 3. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 10. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 4. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 11. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 5. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 12. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 6. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 13. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 7. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 14. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |

PRE

Name:	ID:	Circle Gender & Grade: Male or Female	6	7	8	9	10	11	12
Teacher:	Class Period:	Subject:	Date:						

Granny on the Ramp: Exploring Forces and Motion
Pre/Post Test – MS – ANSWER SHEET

For each item, carefully color in the circle with the letter that corresponds to the answer you choose.

- | | | | | | | | |
|----|-------------------------|-------------------------|-------------------------|-----|-------------------------|-------------------------|-------------------------|
| 1. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 8. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 2. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 9. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 3. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 10. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 4. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 11. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 5. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 12. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 6. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 13. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |
| 7. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C | 14. | <input type="radio"/> A | <input type="radio"/> B | <input type="radio"/> C |

POST

Granny on the Ramp: Exploring Forces and Motion
Pre/Post Test - MS

1. The length of the inclined surface of a ramp is likened to the ____ of a right triangle.
B. hypotenuse
2. Which part of the ramp (triangle) drawn to the right is the “run”?
C. C
3. The “rise:run” ratio is called the ____ of a ramp which indicates the “steepness” of the ramp.
A. slope
4. What does the ADA guideline of a “rise:run” ratio of “1:12” dictate about ramp construction?
A. For every 1 inch of rise, the ramp must have at least 12 inches of run.
5. How are “rise” and “run” related to the “steepness” of a ramp?
C. The higher the rise of a fixed length ramp, the steeper the ramp.
6. Which response gives the best reason why there should be “level landings” at the bottom and top of each ramp run?
B. to help counteract the effects of unbalanced forces acting upon the ramp user
7. The ramp leading into a grocery store is 4 feet long (48 inches) with a rise of 6 inches. For this ramp to meet the ADA guidelines, it must be
C. lengthened.
8. Out of an 8-inch high curb at a pedestrian crossing, a “cut” has been made with a run of 6 feet. What is the ratio of this “curb cut”?
B. 1:9
9. Which of the following is **NOT** part of the ADA guidelines?
C. guarantees job placement and discrimination for disabled workers
10. What does a ramp with a rise 30 inches and a run of 150 inches have in common with a ramp rising 3 inches and running 15 inches? Both ramps
B. have a slope of 1:5
11. The hand is holding “Pom-Pom Granny” and her wheelchair in place, and ____ is pulling down on them.
C. gravity
12. In this picture, the forces acting on “Pom-Pom Granny” and her wheelchair are
A. balanced.
13. What effect would increasing the height of the ramp have on the velocity of “Pom-Pom Granny” and her wheelchair as they travel down the ramp? The velocity would
A. increase.
14. If the toy wheelchair traveled 27 cm down the ramp in 6 seconds, what is its velocity?
A. 4.5 cm/sec, downward