

NAME: \_\_\_\_\_

*A.M.1: Calculate rates using appropriate units (e.g., rate of a space ship versus the rate of a snail).*

1. 080814ia, P.I. A.M.1

Nicole's aerobics class exercises to fast-paced music. If the rate of the music is 120 beats per minute, how many beats would there be in a class that is 0.75 hour long?

[A] 7,200 [B] 5,400 [C] 160 [D] 90

2. 010902ia, P.I. A.M.1

What is the speed, in meters per second, of a paper airplane that flies 24 meters in 6 seconds?

[A] 144 [B] 30 [C] 4 [D] 18

3. 080831ia, P.I. A.M.1

In a game of ice hockey, the hockey puck took 0.8 second to travel 89 feet to the goal line. Determine the average speed of the puck in feet per second.

4. 060901ia, P.I. A.M.1

It takes Tammy 45 minutes to ride her bike 5 miles. At this rate, how long will it take her to ride 8 miles?

[A] 0.89 hours [B] 1.125 hours  
[C] 72 minutes [D] 48 minutes

5. 080936ia, P.I. A.M.1

The chart below compares two runners.

Runner	Distance, in miles	Time, in hours
Greg	11	2
Dave	16	3

Based on the information in this chart, state which runner has the faster rate. Justify your answer.

6. 060831ia, P.I. A.M.1

Tom drove 290 miles from his college to home and used 23.2 gallons of gasoline. His sister, Ann, drove 225 miles from her college to home and used 15 gallons of gasoline. Whose vehicle had better gas mileage? Justify your answer.

7. fall0734ia, P.I. A.M.1

Hannah took a trip to visit her cousin. She drove 120 miles to reach her cousin's house and the same distance back home. It took her 1.2 hours to get halfway to her cousin's house. What was her average speed, in miles per hour, for the first 1.2 hours of the trip? Hannah's average speed for the remainder of the trip to her cousin's house was 40 miles per hour. How long, in hours, did it take her to drive the remaining distance? Traveling home along the same route, Hannah drove at an average rate of 55 miles per hour. After 2 hours her car broke down. How many miles was she from home?

*A.M.1: Calculate rates using appropriate units (e.g., rate of a space ship versus the rate of a snail).*

[1] B \_\_\_\_\_

[2] C \_\_\_\_\_

[2] 111.25 or  $111\frac{1}{4}$ , and appropriate work is shown.

[1] Appropriate work is shown, but the answer is rounded.

or [1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] 111.25, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[3] incorrect procedure.

[4] C \_\_\_\_\_

[3] Greg, and appropriate work is shown to justify the answer.

[2] Appropriate work is shown, but one computational error is made, but an appropriate name is stated.

or [2] Appropriate work is shown computing both rates, but Greg is not stated to have the faster rate.

[1] Appropriate work is shown, but two or more computational errors are made, but an appropriate name is stated.

or [1] Appropriate work is shown, but one conceptual error is made, but an appropriate name is stated.

or [1] Appropriate work is shown to determine one of the rates, but no further correct work is shown.

[0] Greg, but no work is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[5] obviously incorrect procedure.

[2] Ann's, and appropriate work is shown to justify the answer.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] Appropriate work is shown calculating gas mileage of both vehicles, but no further correct work is shown.

[0] Ann's, but no work is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[6] obviously incorrect procedure.

[3] 50, 1.5, and 10, and appropriate work is shown.

[2] Appropriate work is shown, but one computational error is made.

[1] Appropriate work is shown, but one conceptual error is made.

or [1] Appropriate work is shown, but two or more computational errors are made.

or [1] 50, and appropriate work is shown, but no further correct work is shown.

or [1] 1.5, and appropriate work is shown, but no further correct work is shown.

or [1] 10, and appropriate work is shown, but no further correct work is shown.

or [1] 50, 1.5, and 10, but no work is shown.

[0] 50 or 1.5 or 10, but no work is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[7] obviously incorrect procedure.