

## Problems with decimal place control

*Inspector Tenth*

Maximal number of decimal places: **2**

### 1 Problem – Accelerating airplane

*Piotr Nieżurawski, update: 2016-07-30, id: en-kinematics-0000500-dpc, diff: 1*

An airplane, initially at rest in the airport, started to move along a runway with the constant acceleration equal to  $7.87 \text{ m/s}^2$ . Calculate the airplane's speed after the time of 9 s.

**Hint:**  $v = at$

**Answer:** 70.83 m/s

### 2 Problem – Cycling speed

*Piotr Nieżurawski, update: 2016-07-30, id: en-speed-distance-time-0004000-dpc, diff: 3*

Max went by bike from the starting line and rode at the average speed 4.9 m/s. Ann started from the same line 10 s after Max and she finished the race 10 s before Max. Both, Ann and Max, travelled the same distance. What was the Ann's average speed if the total time of her ride was equal to 490 s?

**Hint:** How much time was Max biking? Answer: 510 s.

**Hint:** What was the length of the route? (Max...) Answer: 2499 m.

**Answer:** Ann was cycling with speed 5.1 m/s.