11/16/12

INTRO TO PROBLEM SOLVING
USING THE CONCEPT OF SPEED

$$SPEED = \frac{DISTANCE}{TIME}$$

$$v = \frac{d}{t}$$

THE 5 STEPS → WHAT YOU WILL ALWAYS USE WHEN SOLVING PROBLEMS.

1a) LIST WHAT YOU KNOW

1b) LIST WHAT YOU ARE TRYING TO FIND.

2) WRITE DOWN THE EQUATION YOU ARE GOING TO USE.

3) PUT THE VALUES YOU KNOW INTO YOUR EQUATION.

4) SOLVE FOR YOUR UNKNOWN.

5) CHECK YOUR WORK
   - RESOLVE BY USING WHAT YOU FOUND IN #4 & ONE OF THE GIVEN VALUES TO FIND THE OTHER GIVEN.

EXAMPLE: WHAT WAS USAIN BOLT'S SPEED DURING THE 100-m SPRINT? HIS TIME WAS 9.69 SECONDS.

(1a) $d = 100 \underline{m} \quad t = 9.69 \underline{sec}$

(1b) $v = ?$

(2) $v = \dfrac{d}{t}$

(3) $v = \dfrac{100 \ m}{9.69 \ sec}$

(4) $v = \dfrac{100}{9.69} = \boxed{10.32 \ \dfrac{m}{s}}$

(5) $v = \dfrac{d}{t}$

$10.32 \ \dfrac{m}{s} = \dfrac{d}{9.69 \ sec}$

$(9.69) \cdot 10.32 = \dfrac{d}{9.69} \ (9.69)$

$100.0008 \ m = d \quad \checkmark$