Name: _____ Block: _____ Date: _____

SPEED

LR 170531

For full credit, for each problem, you must have FWUN, that is, you must show
the **Formula** you use, solved for the unknown variable;
your **Work,** (the numbers plugged into the formula);
the correct **Units** in your answer, and, of course,
the correct **Number** in your answer.

1. The world speed record on water was set on October 8, 1978 by Ken Warby of Blowering Dam, Australia. If Ken drove his motorboat a distance of 1000 m in 7.045 s, how fast was his boat moving in m/s?

2. If LaKenya runs at an average speed of 4.5 m/s for 13 s, what distance will she have gone?

3. According to the World Flying Disk Federation, on April 8, 2000, Jennifer Griffin of Fredericksburg, Virginia threw a Frisbee for a distance of 138.56 m to capture the women's record. If the Frisbee was thrown horizontally with a speed of 13.0 m/ s, how long did the Frisbee remain aloft?

4. Hans stands at the rim of the Grand Canyon and yodels down to the bottom. He hears his yodel echo back from the canyon floor 5.20 s later. Assume that the speed of sound in air is 340.0 m/s. How deep is the canyon at this location?

5. Convert 35 mi/h to

a. km/h

b. m/s

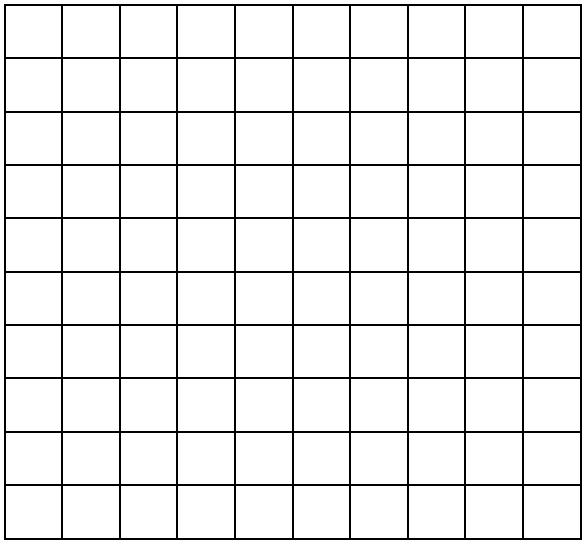
6. According to the World Flying Disk Federation, on April 8, 2000, Jennifer Griffin of Fredericksburg, Virginia threw a Frisbee for a distance of 138.56 m to capture the women's record. If the Frisbee was thrown horizontally with a speed of 13.0 m/ s, how long did the Frisbee remain aloft?

7. It is now 10:29 a.m., but when the bell rings at 10:30 a.m. Suzette will be late for French class for the third time this week. She must get from one side of the school to the other by hurrying down three different hallways. She runs down the first hallway, a distance of 35.0 m, at a speed of 3.50 m/ s. The second hallway is filled with students, and she covers its 45.0-m length at an average speed of 1.20 m/ s. The final hallway is empty, and Suzette sprints its 60.0-m length at a speed of 5.00 m/ s. a) Does Suzette make it to class on time or does she get detention for being late again? Show your work to justify your answer. b) Draw a distance vs. time graph of the situation.

a.

b.

Distance, m



time, s