# Formula Challenge

Name _____

**What do the following units represent?   Use D for distance, T for time, S for speed, or A for acceleration.**

_____ 1. 14 km          _____ 4. 6 hours          _____ 7. 14 mi          _____ 10. 1.4 m

_____ 2. 30 m/s         _____ 5. 12 cm/s$^2$      _____ 8. 3.2 sec        _____ 11. 6 cm/min/sec

_____ 3. 34 min         _____ 6. 150 mph          _____ 9. 25 ft          _____ 12. 3 km/hr/sec

**Solve each problem!  Be sure to show your work!**

13.  Goldie Goldfish, a speed swimmer, loves to race around the park's pond, which is 0.5 miles around.  If she can swim 20 laps around the track in 2 hours, what is her average <u>speed</u>?

14.  It takes Stu, a slimy slug, 20 minutes to travel from his favorite bush to the local trash can (a trip of 30 meters), how <u>far</u> can he travel in 1 hour (60 minutes)?

15.  At exactly 2:00 pm, Speedy the Snail crawls onto a meter stick at the 10 cm mark.  If he reaches the 65 cm mark at exactly 2:10 pm, what is his <u>speed</u>?

16.  If it takes Leaping Louie 5 minutes to jump 3 blocks, <u>how long</u> will it take for him to jump 15 blocks?

17.  If Bert the Bat travels eastward at 40 mph with a <u>tail wind</u> of 6 mph, what is his actual <u>speed</u>?

18.   Toon Train is traveling at the speed of 10 m/s at the top of a hill.  Five seconds later it reaches the bottom of the hill and is moving at 30 m/s.  What is the rate of <u>acceleration</u> of Toon Train?

19.  Pete the Penguin loves to sled down his favorite hill.  If he hits a speed of 50 m/s after 5 seconds, what is his rate of <u>acceleration</u>?  Hint:  He starts at 0 m/s at the top of the hill.

20.  Monster Mike's truck decelerates from 72 m/s to 0 m/s in 6 seconds.  What is his rate of <u>deceleration</u>?