

Name

Period

Quiz over days 1 & 2

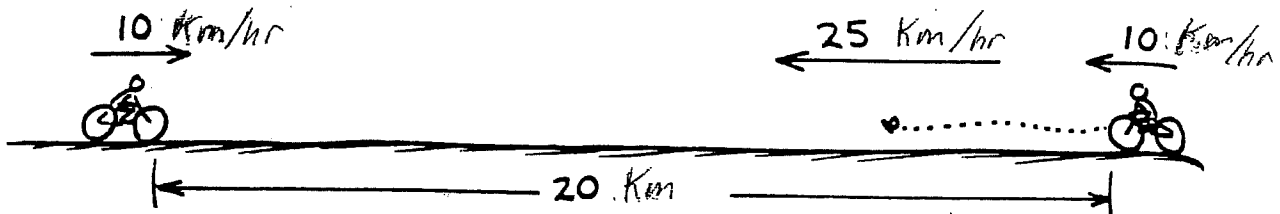
Answer any five of the following six problems (you may do all six for extra credit) [5 pt. quiz but 6 pts possible]

1. Which Physics principle does the toilet use? (Siphon, Bernoulli Principle, Rube Goldberg) circle one
2. Which Physics principle gives a plane lift? (Siphon, Bernoulli Principle, Rube Goldberg) circle one
3. Which Physics principle stresses making the hardest way possible to do the simplest task? (Siphon, Bernoulli Principle, Rube Goldberg)
4. Do objects move from **High pressure toward Low pressure** or **Low pressure toward High pressure** (circle one)
5. My son asked me how fast he could run and how fast he could ride his bicycle ( in km/hr).

If you were his father, name a way you could help him figure these things out?

6.

**6. THE BIKES AND THE BEE**



Two bicyclists travel at a uniform speed of 10 km/hr toward each other. At the moment when they are 20 km apart, a bumble bee flies from the front wheel of one of the bikes at a uniform speed of 25 km/hr directly to the wheel of the other. The bee touches the wheel and turns around in a negligibly short time and returns at the same speed to the first bike, whereupon the bee touches the wheel and instantaneously turns around and repeats the back-and-forth trip over and over again – successive trips becoming shorter and shorter until the bikes collide and squash the unfortunate bee between the front wheels.

What was the total mileage of the bee in its many back-and-forth trips from the time the bikes were 20 km apart until its hapless end? (hint: This can be very simple or very difficult, depending on your approach.)