21. What is the equation for finding the Force of Friction? (it's so fun). $F_f = \mu N$

22. How much friction is there when the coefficient of friction is .34 and the weight is 14 N?

$F_f = .34\,(14\,N) = 4.76\,N$

23. What is the equation for Acceleration that includes time and velocity?

$a = \frac{V_f - V_0}{\Delta t}$

24. When a car hits a tree, what effect does increasing Δt have on acceleration?

25. Other than Δt , how else could you minimize the acceleration of a car hitting a tree?

26. If your speed increased steadily from 14 mph to 17 mph in the first second, and then from 17 mph to 20 mph in the 2nd second, then what was your acceleration? (with units)

Dimensional Analysis (conversion problems) Show all steps! Include all units!

27. How many cups are in 1.3 gallons?

$\frac{1.3\ Gal}{1}\left(\frac{4\ Qt}{1\ Gal}\right)\left(\frac{2\ Pt}{1\ Qt}\right)\left(\frac{2\ Cup}{1\ Pt}\right) = 20.8\ cups$

28. Convert 55 $\frac{miles}{Hour}$ to $\frac{ft}{sec}$

$\frac{55\ miles}{hr}\left(\frac{5280\ ft}{1\ mi}\right)\left(\frac{1\ hr}{60\ min}\right)\left(\frac{1\ min}{60\ sec}\right) = 80.67\ \frac{ft}{sec}$

29. How much is a: Fathom 6 ft Cubit 18 in Ream 500 sheets Yard 3 ft

30. In a collision, if all of the energy is transferred from one object to another then the collision is considered to be elastic

31. When we drop Pla-Doh onto the floor, the collision is inelastic

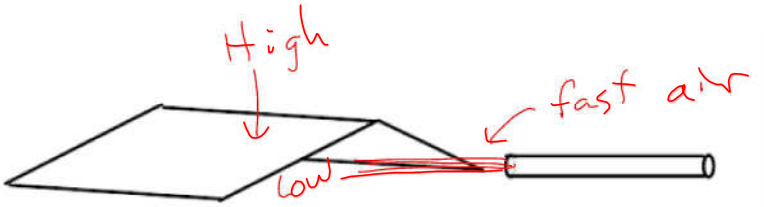
32. Air resistance is a form of friction called drag. In racing, one way to reduce drag is to closely follow another car. This is called Drafting

33. State Bernoulli's Principle.

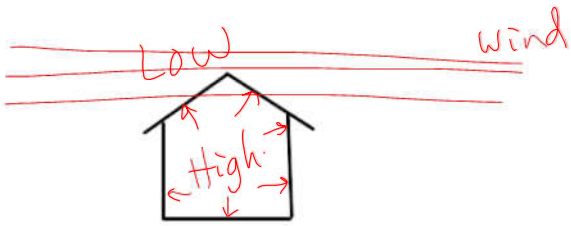
Fast-moving fluids (liquid or gas) have low pressure associated with them.

34. Pressure always pushes from High to Low

35. Label the tent diagram and describe what is going on, and why?



36. When a tornado is NEAR, you are supposed to open windows to protect your house. How does that work? Make sure to include Bernoulli's Principle and Pressure. Add to the picture to support your written statement.



High winds cause low pressure outside the house. Bernoulli says Fast wind has low pressure. Pressure inside house is higher opening windows allows high Pressure to go out and may keep your house intact.