Gravity/Friction/Momentum Review 1

1. What <u>two</u> factors determine the amount of friction between two objects?

2. Explain why a female pro golfer can hit a golf ball further than the average NFL linebacker. (show equation)

3. If an object is moving with a velocity of 5 m/s south, what is the direction of the object's momentum?

_____

 a) How does the direction of an objects motion compare to the direction of the friction force? _____

4. What happens to each of the following quantities when we move away from the earth?

Mass _____   Weight _____ Force from the earth _____

5. What are the units for each of the following quantities?

Mass _____   Weight _____ Force from the earth _____

6. Write the gravity equation _____

7. How would the force of gravity between the earth and moon change if you:

a) tripled the mass of the earth (moon unchanged) _____ b) doubled the mass of the moon only _____

c) tripled the mass of the earth **and** doubled the mass of the moon _____

d) Quadrupled the distance between the moon and earth _____

e) Doubled the mass of the earth and moon and doubled their separation distance. _____

8. Compare the earths force on you with your force on the earth.

9. At constant speed the applied force on an object = _____

10. Scalar (S) or Vector (V) ?? - momentum _____impulse _____ Force of Gravity_____ mass_____ Friction_____

11. Be able to create the big momentum equation (from your notes) J = Ft = _____ = _____

 12. A constant braking force of 5 N is applied for 5 seconds is used to stop a 10 kg cart traveling at 2.5 m/s. The magnitude of the impulse applied to stop the cart is …

13. All things being equal, which 2 materials on the reference table would produce the

greatest amount of friction? _____ least? _____