Name _____ Date _____

	Friction = $F_{(NORMAL)} \times u$ w = mg $g = 9.8\ m/s^2$ F = ma d=vt $v_f = v_i + at$ $d= v_it + (1/2)at^2$
80	**Another Review for Test 1 MP 3**

1) What is the weight of a 30 kg object?

2) What is the net force if a 300 N force is used to push an object and the force of friction is 250 N?

3) What is the net force if a 20 kg object accelerates at 3 m/s^2?

4) What is the net force if a 200 N force is applied to a 10 kg object where u = 0.5?

Answers: 1) 294 N 2) 50 N 3) 60 N 4) 151 N

5) An object is dropped from a height of 3.6 m. How long does it take to hit the ground?

6) A projectile is launched horizontally from a cliff that is 45 m high. The initial speed of the projectile was 30 m/s. What is the range of the projectile?

7) The initial velocity of an object is 36 m/s. The final velocity is 117 m/s. This took 16 s. What was the acceleration of the object?

Answers: 5) 0.86 s 6) 90 m 7) 5.06 m/s^2

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8) What was the acceleration of a 5 kg object if u = 0.7 and the applied force is 74.3 N?

9) A rocket is fired straight up into the air. From an initial speed of zero, It accelerates upward at 5 m/s^2 for 20 s. At this point, the engine burns out. How high does the rocket go?Hint:(this is a 2 phase problem)

Answers: 8) 8 m/s^2 9) 1,510 m

10) A projectile is fired from the ground at an angle. The projectile had a range of 200 m and reached a maximum height of 60 m.

a) What was the velocity in the horizontal direction?

b) What was the final velocity in the vertical direction?

11) A 20 kg object was moving at 10 m/s as a 15 N force of friction was working against it. After 5 s, the object has a speed of 30 m/s. What was the applied force?

Answers: 10a) 28.6 m/s b) 34.3 m/s 11) 95 N