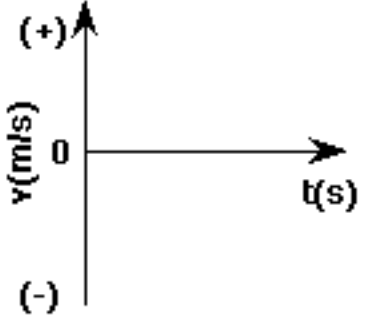
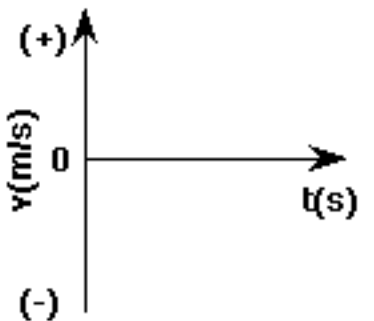
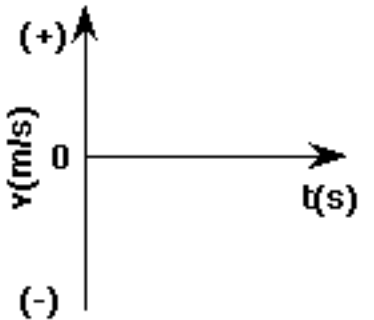


Name _____

Period _____ Date _____

UNIT III: WORKSHEET 4

The problem	v vs t graph	Solution
<p>1. A poorly tuned Yugo can accelerate from rest to a speed of 28 m/s in 20 s.</p> <p>a) What is the average acceleration of the car?</p> <p>b) What distance does it travel in this time?</p>		
<p>2. At $t = 0$ a car has a speed of 30 m/s. After 6 s, its speed is 15 m/s.</p> <p>What is its average acceleration during this time interval?</p>		
<p>3. A bear spies some honey and takes off from rest, accelerating at a rate of 2.0 m/s^2.</p> <p>If the honey is 10 m away, how fast will his snout be going at the moment of ecstasy?</p>		
<p>4. A bus moving at 20 m/s ($t = 0$) slows at a rate of 4 m/s each second.</p> <p>a) How long does it take the bus to stop?</p> <p>b) How far does it travel while braking?</p>		

<p>5. A car whose initial speed is 30 m/s slows uniformly to 10 m/s in 5 seconds.</p> <p>a) Determine the acceleration of the car.</p> <p>b) Determine the distance it travels in the 3rd second.</p>		
<p>6. A dog runs down his driveway with an initial speed of 5 m/s for 8 s, then uniformly increases his speed to 10 m/s in 5 s.</p> <p>a) What was his acceleration during the 2nd part of the motion?</p> <p>b) How long is the driveway?</p>		
<p>7. A physics student skis down a slope, accelerating at a constant 2.0 m/s^2. If it takes her 15 s to reach the bottom, what is the length of the slope?</p>		
<p>8. A mountain goat starts a rock slide and the rocks crash down the slope 100 m. If the rocks reach the bottom in 5 s, what is their acceleration?</p>	