

## Hydro Power Physics Problems

1. If the force of the water is 20N, and the mass of the water is 60kg, how much is it accelerated?	A. 1 / 3 m/s B. 3 m/s C. 5m/s D. 1 / 5 m/s
2. When water increases velocity 30 meters per second in three seconds, and its mass is 0.65 kg, what is the force that it exerts?	A. 6.5N B. 65N C. 25N D. 28N
3. What is the kinetic energy of Question #2?	A. 300J B. 186J C. 432J D. 293J
4. When the force of the water is 220 N and the velocity is 40 mph, what is the power of the water?	A. 602W B. 139W C. 931W D. 0.348W
5. The power generated because of 10 kJ of work in five hours is what?	A. 0.56W B. 560W C. $2.35 \cdot 10^4$ W D. 901W
6. If the mass of water is 60kg and the acceleration is $3.2 \text{ m/s}^2$ , what is the force?	A. 202N B. 192N C. 47N D. 63N
7. What is the acceleration if the mass is 102 kg, and the force is 102N?	A. $1 \text{ m/s}^2$ B. $2 \text{ m/s}^2$ C. $3 \text{ m/s}^2$ D. $4 \text{ m/s}^2$
8. Find the mass of water if the acceleration is $40 \text{ m/s}^2$ and the force is 68N.	A. 3.6 kg B. 1.7kg C. 400g D. 308g
9. What is the kinetic energy for Question #8 if the time is 3 seconds?	A. 68J B. 212kJ C. 32J D. 24.5kJ
10. How much power is used when energy consumed is 29J over a time interval of 60 seconds?	A. .5 seconds B. .75 seconds C. 7/8 seconds D. 2/9 seconds