

**Objectives**

- Find the power of a student when doing pushups.

**Materials**

- Stopwatch
- Meter stick

**Procedure**

1. Choose a group member to do pushups. They need to know their weight. Convert their weight to mass in kg.  $m =$  \_\_\_\_\_ kg
2. A person lifts approximately 65% of their mass when doing a pushup. How much mass will your group member be lifting?  $m =$  \_\_\_\_\_ kg
3. Measure the height of their shoulders at the lowest part of a pushup.  $h_1 =$  \_\_\_\_\_ m
4. Measure the height of their shoulders at the highest part of a pushup.  $h_2 =$  \_\_\_\_\_ m
5. What distance do the shoulders move during a pushup (just going up)?  $x =$  \_\_\_\_\_ m
6. How much work is done for one pushup? \_\_\_\_\_ J
7. How much work is done for 10 pushups? \_\_\_\_\_ J
8. Time how long it takes your group member to do 10 pushups.  $t =$  \_\_\_\_\_ s
9. Calculate the power of doing 10 pushups by your group member.  $P =$  \_\_\_\_\_ W
10. Compare your result with other groups.