

Imagine the Possibilities

***The Wall
E-Day High School Competition
Herff College of Engineering
The University of Memphis
16 November 2007***

The competition is designed to test the ingenuity of the team in a situation where time and physical resources are limited.

Each team will consist of four team members taken from the same High School. A school may enter up to four teams. The event will take approximately 15 minutes to complete and times to compete can be selected when registering on the web for the event.

The winning team will have \$400 donated to their sponsoring school or class and a plaque from the college. The second place team will get \$200 donated to their sponsoring school or class and the third place team will get \$100 donated to their sponsoring school or class. The fourth place team will receive \$50.

To register your team and to get event times, please visit the web site at

www.engr.memphis.edu/EDAY2007

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9 a.m. until 6 p.m.
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The Wall Yet Again

The Wall is a competition about resource utilization and balancing forces. The basic premise of the competition is to support one team member on a wooden wall using common duct tape.

We will supply the duct tape.

The original mass of the duct tape will be measured when the team checks in. There is no limit to the number of rolls of duct tape that may be used.

The team must then select one member of their team to be supported on the Wall.

The team will be provided with a chair which must be attached to the wall with the lowest point on the chair one foot above the ground.

The team will have ten minutes to use the duct tape to attach the chair to the wall.

The duct tape may not extend beyond the area described on the wall. The area will include the front surface of the wall, the right and left side of the wall and a one foot area on the back side of the wall. Tape may not be placed over the top of the wall past the front surface of the wall.

Once the chair is in place, the selected team member will sit in the chair with his or her feet off the ground. The person in the chair must have their back flush with the chair back.

The team member in the chair may not hold onto any part of the Wall and may not have any other support other than the chair.

The student must be supported above the floor for at least three minutes.

If the student is supported for the minimum amount of time then the score will

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be calculated using the expression shown below

The final mass of tape will be determined by taking the mass of the duct tape minus all the tape that was used on the Wall. Cores and scraps not used should be submitted to be included in the final mass of the tape.

The team with the highest ratio at the end of the competition will be declared the winner.

$$\text{Team Score} = \frac{\text{Weight of student supported (lb)}}{\text{Initial Mass of Tape (gm)} - \text{Final Mass of Tape (gm)}}$$



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