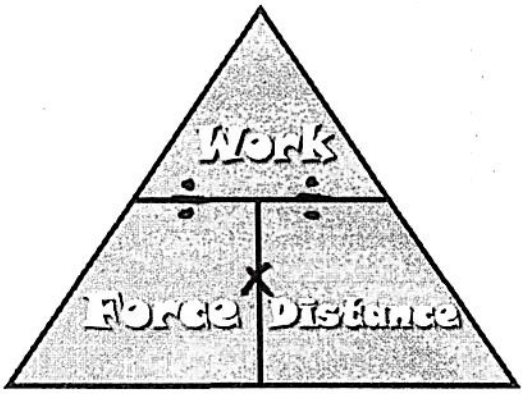
Name: _____ Date: 12/2/19 Period: _____
(Practice)

Work Word Problems

Directions: Use your knowledge of calculating work to answer the following problems. Make sure to show all work and include units. Round all final answers to the nearest tenth.



Formulas

Work= Force x Distance

Force = Work / Distance

Distance = Work / Force

1. A person pushes a block 4 meters (D) with a force of 24 N. (F) How much work was done?

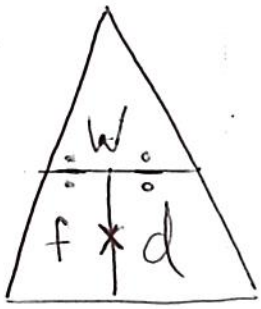
Formula	$W = F \times D$
Substitution	$W = 24\,N \times 4\,m$
Final Answer with Units	$W = 96.0\,J$

2. A person does 15 J of work (W) moving a couch 1.3 m. (D) How much force (?) was used?

Formula	$F = \frac{W}{D}$
Substitution	$F = \frac{15\,J}{1.3\,m}$
Final Answer with Units	$F = 11.5\,N$

3. A baseball player hit a 125 meter grand slam in game 2 of the World Series. He did 3000 J of work. With what force did he hit the ball?

Formula	$F = \frac{W}{d}$
Substitution	$F = \frac{3000 J}{125 m}$
Final Answer with Units	$F = 24.0\ N$



4. You lift a box that weighs 50 N to a height of 1.7 m. How much work was done on the box?

Formula	$W = F \times D$
Substitution	$W = 50 \times 1.7$
Final Answer with Units	$W = 85.0\ J$

5. A bulldozer performs 75,000 J of work pushing dirt 18 meters. What is the force?

Formula	$f = \frac{W}{d}$
Substitution	$f = \frac{75{,}000\ J}{18\ m}$
Final Answer with Units	$F = 4{,}166.7\ N$

6. A 750 N skydiver jumps out of an airplane that is flying at an altitude of 2800 m. By the time the skydiver reaches the ground, how much work was done on her by gravity?

Formula	$W = f \times d$
Substitution	$W = 750N \times 2800.m$
Final Answer with Units	$W = 2{,}100{,}000.0\ J$