WORK and POWER

Name _____

Part A: The Work Formula

$$W = Fd$$

Symbol	Quantity	Unit
W	Work	Joules (J)
F	Force	Newtons (N)
d	Distance	Meters (m)

When something DOES NOT MOVE, no work is done!

A.1 I push a file cabinet with a force of 1000 N for a distance 2 m. What is the work I did?

Looking For	Formula
Already Know	
Answer as equation *with unit*:	

A.2 I pick up a book with 30 N of weight. I lift to a height of 4 m. What is the work I did?

Looking For	Formula
Already Know	
Answer as equation *with unit*:	

A.3 A weakling pushes a car with 2000 N of force for 15 minutes, but the car does not move. How much work does he do?

A.4 If something does not move, then no work is done. Why not?

WORK and POWER Name _____

A.5 A person does 150 Joules of work by lifting a block 2 meters. What is the weight of the block?

Looking For	Formula	
Already Know		
Answer as equation *with unit*:		

A.6 A very angry man punches the wall 200 times, each time exerting 200 Newtons of force. The wall is unaffected. How much work does he do?

Looking For	Formula	
Already Know		
Answer as equation *with unit*:		

A.7 A person pushes a block with a force of 200 Newtons and does 3000 Joules of work. How far did he push the block?

Looking For	Formula	
Already Know		
Answer as equation *with unit*:		

A.8 A weightlifter lifts a 800 Newton weight to a height of 2 m. How much work did he do?

Looking For	Formula	
Already Know		
Answer as equation *with unit*:		

A.9 A person pushes a rock with 500 Newtons of force, but does not work. How far did the rock move?