Name:_____ Date:_____ Class:_____

PHYSICAL SCIENCE WORKSHEET
WORK & POWER

1. You must exert a force of 4.5 N on a book to slide it across the table. If you do 2.7 J of work in the process, how far have you moved the book?

FORMULA USED	WORK SHOWN	FINAL ANSWER

2. The world's most powerful tugboats are capable of providing 8,170,000 W of power. How much work does one of these tugboats do in 12.5 seconds?

FORMULA USED	WORK SHOWN	FINAL ANSWER

3. A child pulls a slide up a snow covered hill. In the process the child does 405 J of work on the sled. If she walks 15 m up the hill, how large a force has she exerted on the sled?

FORMULA USED	WORK SHOWN	FINAL ANSWER

4. A mover is loading a 253 kg crate of hammers onto a truck. The upward force on the crate is 2470 N and 3650 J of work are required to raise the crate from the pavement to the truck bed. How far is the crate lifted?

FORMULA USED	WORK SHOWN	FINAL ANSWER

5. Suppose a weightlifter's power output is 178 W during the time he does 3310 J of work on the weights. How long does it take the weightlifter to raise the weights?

FORMULA USED	WORK SHOWN	FINAL ANSWER

6. A crane is able to lift 22, 500,000 kg. If the crane is able to raise this mass a distance of 20.0m by doing 432,000,000 J of work in 35.0 seconds, how much power has the crane provided?

FORMULA USED	WORK SHOWN	FINAL ANSWER