



Directed Reading for
Content Mastery

Section 1 ■ Work
Section 2 ■ Using Machines

Directions: In the blank, write the term from the list below that correctly completes each statement about the equations given. Terms may be used more than once.

work	output paperwork	input work
	time	energy
distance	power	force
		height of slope

- | | |
|---|--|
| <p>1. In the equation $W = F \times d$</p> <p>a. W stands for _____.</p> <p>b. F stands for _____.</p> <p>c. d stands for _____.</p> <p>2. In the equation $W_{in} = W_{out}$</p> <p>a. W_{in} stands for _____.</p> <p>b. W_{out} stands for _____.</p> | <p>3. In the equation $P = W/t$</p> <p>a. P stands for _____.</p> <p>b. W stands for _____.</p> <p>c. t stands for _____.</p> <p>4. In the equation $P = E/t$</p> <p>a. E stands for _____.</p> <p>b. t stands for _____.</p> |
|---|--|

Directions: In the words below, code letters have been substituted for letters of the alphabet. Use the following key to decode the words. In the key, the code letters are shown directly above the alphabet letter each stands for. Write the correct words on the lines provided.

A	B	C	D	E	F	G	H	J	K	L	N	O	R	T	U	W	X	Y	Z
r	w	h	i	c	l	o	s	m	v	d	u	t	g	a	f	n	e	j	y

Prying into things

5. XWXARZ _____
6. YGNFX _____
7. XUUGAO UGAEX _____
8. AXHDHOTWEX UGAEX _____
9. JXECTWDETF TLKTWOTRX _____
10. LDAXEODGW _____
11. WXBOGW _____

SECTION
2**Reinforcement****Using Machines**

Directions: *In the space provided, define and express the term or equation for each of the following.*

1. effort force _____

2. resistance force _____

3. mechanical advantage _____

4. efficiency _____

Directions: *Use the information above to solve the following problem.*

5. A carpenter uses a crowbar to remove the top of a box. The top has a resistance of 500 N. The carpenter applies an effort force of 250 N. What is the mechanical advantage of the crowbar?

Directions: *Answer the following questions with complete sentences.*

6. What are two ways that machines make work easier?

7. How does a crowbar used to remove the top of a box change the direction of the force?

8. What is ideal mechanical advantage?

