

Name: _____

Date: _____

Science Worksheet – Physical Science

Work the following showing all work with the formula, the formula with the proper numbers and units, then the answer with the proper unit. You may need to do some of these on a separate page.

Work = force x distance

1. $F = 200$ Newtons Formula: _____

$d = 50$ meters Substitution: _____

$W = ?$ Answer with unit of measure: _____

2. $F = 5$ Newtons Formula: _____

$W = 75$ Joules Substitution: _____

$D = ?$ Answer with unit of measure: _____

3. $W = 125$ Joules Formula: _____

$d = 10$ meters Substitution: _____

$F = ?$ Answer with unit of measure: _____

4. $F = 90$ N _____

$d = 5$ m _____

$W = ?$ _____

5. $F = 6$ N _____

$W = 72$ J _____

$d = ?$ _____

6. $W = 120$ J _____

$d = 24$ m _____

$F = ?$ _____

7. $W = ?$ _____

$F = 62.6$ N _____

$d = 13$ m _____

8. $W = 13.2$ J _____

$F = 2$ N _____

$d = ?$ _____

9. $W = 136$ J _____

$d = 27.2$ m _____

$F = ?$ _____

10. If 360 Joules of work are needed to move a crate a distance of 4 meters, what is the weight of the crate?

11. If a group of workers can apply a force of 1000 Newtons to move a crate 20 meters, what amount of work will they have accomplished?

12. If 68 Joules of work were necessary to move a 4 Newton crate, how far was the crate moved?

13. If 150 Joules of work is needed to move a box 10 meters, what force was used?

Power = work / time

1. $W = 500$ Joules Formula: _____
 $t = 25$ seconds Substitution: _____
 $P = ?$ Answer with unit of measure: _____

2. $P = 25$ watts Formula: _____
 $W = 5000$ Joules Substitution: _____
 $t = ?$ Answer with unit of measure: _____

3. $P = 170$ watts Formula: _____
 $t = 20$ seconds Substitution: _____
 $W = ?$ Answer with unit of measure: _____

4. If a man moves a large box that weighs 10 Newtons 20 meters in 30 seconds, how much power was used?

5. $W = 100$ J	_____	6. $W = 225$ J	_____	7. $P = 20$ W	_____
$t = 10$ s	_____	$P = 25$ W	_____	$t = 15$ s	_____
$P = ?$	_____	$t = ?$	_____	$W = ?$	_____

8. $W = 500$ J	_____	9. $W = 336$ J	_____	10. $W = ?$	_____
$t = 25$ s	_____	$t = ?$	_____	$t = 16.6$ s	_____
$P = ?$	_____	$P = 14$ W	_____	$P = 64$ W	_____

11. A person weighing 600 N gets on an elevator. The elevator lifts the person 6 m in 10 seconds. How much power was used?

12. How much time is needed to produce 720 Joules of work if 90 watts of power is used?