Name_____ Class_____ Date_____

1 A man is using a machine and applying 400 N of force. If the mechanical **advantage** of this **machine** is **doubled**, how much force would he have to apply?

A double the original force
B half the original force
C the same original force
D no force at all

2 The unit of measurement used to tell how much work has been done is called a **joule**. What is **1 joule** equal to?

A 1 kg x 1 m
B 1 m x 1 L
C 1 N x 1 m
D 1 N x 1 kg

3 In the diagram below, a worker is pushing a barrel **up** a **ramp**. Another name for this ramp is a(n) _____.

4 In the picture below, how could the worker **increase** the **mechanical advantage** of the ramp?

5

7
A take one hand off the rake
B put both hands together
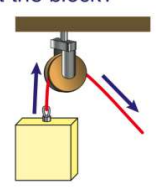C shorten the rake
D put her right hand further down the handle

amount of work input. Knowing this, **how much work** is being **put into** a machine if its efficiency is **80%** and the work output is **80 joules**?

$$\text{efficiency} = \frac{\text{work output} \times 100}{\text{work input}}$$

A 80 joules   C 100 joules
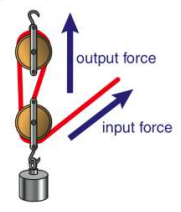B 90 joules   D 180 joules

9 If a worker was using the **pulley** pictured in the diagram below, how much **force** is he saving to lift the block?

A half
B double
C triple
D none

10 What is the **mechanical advantage** of the pulley system shown below?

A 1
B 2
C 3
D 4

output force
input force

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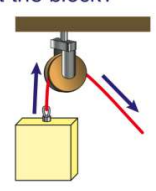D put her right hand further down the handle

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