




Name _____ Class _____ Date _____


1 When teeth are used for biting food, the **sharp edge** of a tooth serves as a(n) _____.

A wedge
B screw
C wheel and axle
D inclined plane




2 The diagram below shows a **wheel and axle**. What two pieces of information are **necessary** to **calculate** the mechanical advantage of this simple machine?

A length of the axle and width of the wheel
B length of the axle and weight of the wheel
C radius of the axle and thickness of the wheel
D radius of both the wheel and axle




3 In the diagram of the wheel and axle, the radius of the **wheel** is **9 cm** and the radius of the **axle** is **3 cm**, the mechanical advantage would be _____.

A 1
B 2



4 How could the mechanical advantage of the **wheel and axle** shown below be increased?

A increase the diameter of the axle
B increase the length of the axle



5



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6

_____ work input

A 100 joules
B 200 joules
C 75 joules
D 50 joules


7

A divided machine
B useless machine
C simple machine
D compound machine




9 How does **lubrication** of a sewing machine **improve** its efficiency?

A lubrication reduces momentum
B lubrication decreases the amount of friction
C lubrication decreases the amount of work output
D lubrication increases the amount of work input



10 What two **simple machines** is this man using?

A pulley and lever
B wheel and axle and lever
C inclined plane and lever
D wedge and lever





ANSWER KEY

When teeth are used for biting food, the **sharp edge** of a tooth serves as a(n) _____.

- A wedge
- B screw
- C wheel and axle
- D inclined plane



(a)

The diagram below shows a **wheel and axle**. What two pieces of information are **necessary** to **calculate** the mechanical advantage of this simple machine?

- A length of the axle and width of the wheel
- B length of the axle and weight of the wheel
- C radius of the axle and thickness of the wheel
- D radius of both the wheel and axle



(d)

In the diagram of the wheel and axle, the radius of the **wheel** is **9 cm** and the radius of the **axle** is **3 cm**, the mechanical advantage would be _____.

- A 1
- B 2
- C 3
- D 4



(c)

How could the mechanical advantage of the **wheel and axle** shown below be increased?

- A increase the diameter of the axle
- B increase the length of the axle
- C increase the diameter of the wheel



(c)



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- A 100 joules
- B 200 joules
- C 75 joules
- D 50 joules

- C simple machine
- D compound machine



How does **lubrication** of a sewing machine **improve** its efficiency?

- A lubrication reduces momentum
- B lubrication decreases the amount of friction
- C lubrication decreases the amount of work output
- D lubrication increases the amount of work input



(b)

What two **simple machines** is this man using?

- A pulley and lever
- B wheel and axle and lever
- C inclined plane and lever
- D wedge and lever



(b)