

Name: _____ Date: _____

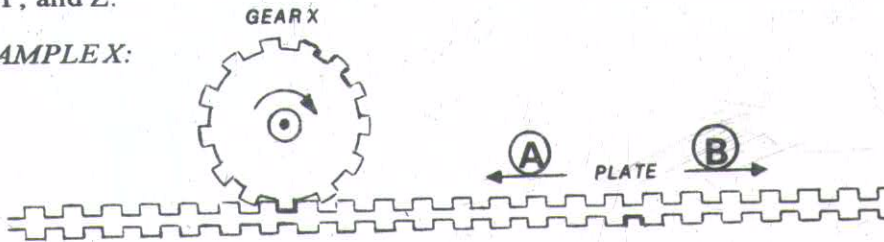
Age: _____ Sex: _____

Class/Occupation: _____

Address: _____ Ph: _____

Find the space for **MA** on your Answer Sheet or mark your answers in this booklet. Do as directed. In this test, you will answer questions about *mechanical facts and principles*, by marking one of the five choices given. Sometimes there will be a picture with the question; sometimes not. Some examples follow. Mark the correct answers in the boxes for **EXAMPLES X, Y, and Z**.

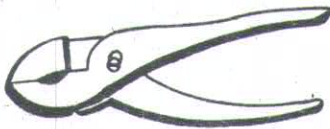
EXAMPLE X:



If gear X is locked in its place, but can turn, and is turning in the direction of the arrow, which way is the *Plate* moving?

- a. A
- b. B
- c. first A, then B
- d. first B, then A
- e. the Plate is not moving

EXAMPLE Y:



Which is this tool?

- a. wrench
- b. pipe wrench
- c. scissors
- d. pliers
- e. clamp

EXAMPLE Z:

Any material that electricity will pass through is called a(n)

- a. insulator
- b. magnet
- c. transformer
- d. filament
- e. conductor

**Mark Your
Answers Here**

a b c d e

a b c d e

a b c d e

The correct answer for **EXAMPLE X** is **a.**, since the plate would have to move in *direction A*. For **EXAMPLE Y**, the answer is **d. pliers**, and for **EXAMPLE Z**, the answer is **e. conductor**. Therefore, you should have filled in the **a.** box for **EXAMPLE X**, the **d.** box for **EXAMPLE Y** and **e.** box for **EXAMPLE Z**.

Work as quickly as you can. You will have 9 minutes for all the items on this test. If you are not sure of the right answer for an item, mark the choice that is your best guess. If you finish before the time is called, please **STOP** and do not turn to other pages.

PLEASE WAIT FOR THE INSTRUCTION TO START

1.



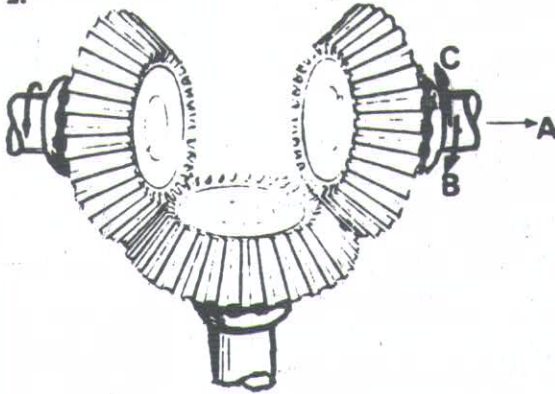
On what material would this *chisel* be used?

- a. metal
- b. cement
- c. plastic
- d. wood
- e. glass

Mark Your Answers Here

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.



If the gear on the left turns in the direction of the arrow, which way does the gear on the right turn?

- a. A
- b. B
- c. C
- d. alternately B and C
- e. the right gear does not turn

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.



What is this tool?

- a. drill
- b. welding torch
- c. paint sprayer
- d. soldering gun
- e. burning tool

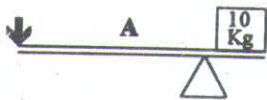
a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. A device that does the same thing as a *fuse* does is called a(n)

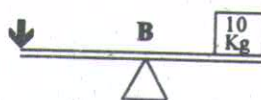
- a. circuit breaker
- b. resistor
- c. relay
- d. alternator
- e. voltage regulator

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

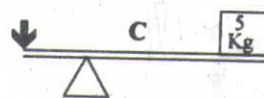
5. In which of the following situations is the *least force* needed at the arrow, to balance the lever?



- a. A
- b. B



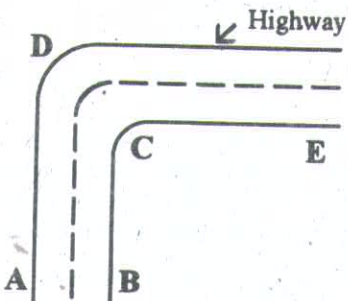
- c. C
- d. A and C



- e. B and C

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.

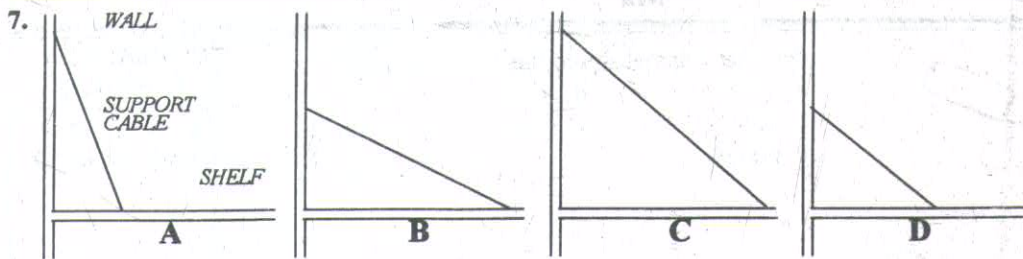


Where should the highway be elevated or raised?

- a. A
- b. B
- c. C
- d. D
- e. E

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

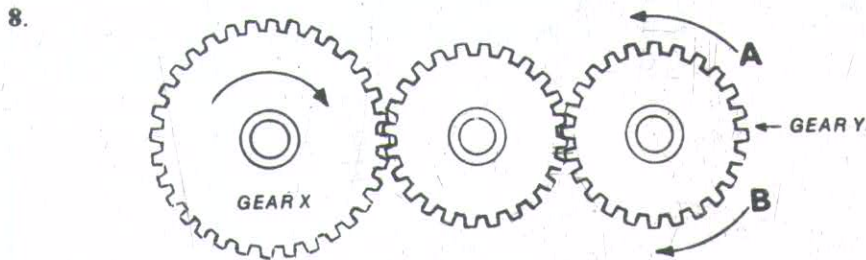
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Which of the shelves will support the greatest weight?
 a. A b. B c. C d. D e. they will all support the same weight

Mark Your Answers Here

a b c d e



If Gear X is turning in the direction of the arrow, in what *direction* and *how fast* is Gear Y turning?

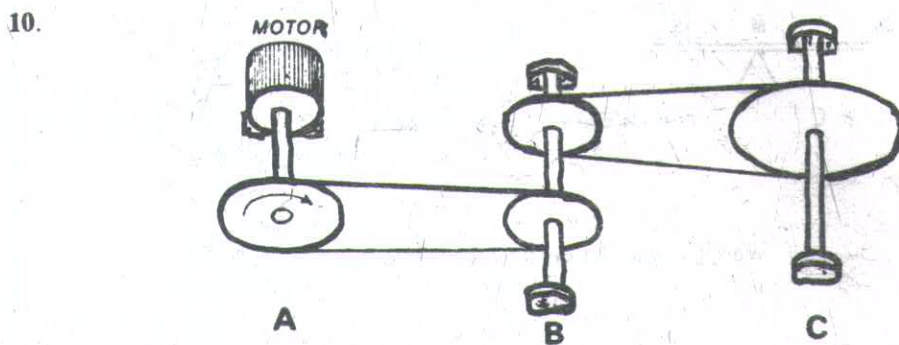
- a. in direction A and the same speed as Gear X
- b. in direction A and faster than Gear X
- c. in direction B and slower than Gear X
- d. in direction B and the same speed as Gear X
- e. in direction B and faster than Gear X

a b c d e

9. Powdered graphite is useful as a(n)

- a. adhesive
- b. thickening agent
- c. fuel
- d. lubricant
- e. conducting agent

a b c d e



Which shaft is turning fastest?

- a. A
- b. B
- c. C
- d. A and C
- e. they will all move at the same speed

a b c d e

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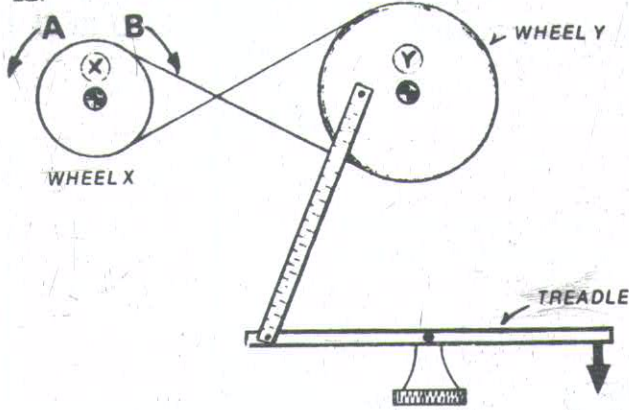
11. In which of the following lists are the four metals arranged from *hardest to softest*?

- a. steel, copper, iron, lead
- b. steel, iron, lead, copper
- c. iron, steel, copper, lead
- d. iron, steel, lead, copper
- e. steel, iron, copper, lead

Mark Your Answers Here

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12.



In what direction and how fast is Wheel X turning as the Treadle moves in the direction of the arrow?

- a. direction A and faster than wheel Y
- b. direction A and slower than wheel Y
- c. direction B and faster than wheel Y
- d. direction B and slower than wheel Y
- e. direction A and the same speed as wheel Y

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. A basic part of many *thermostats* is

- a. a knife switch
- b. a bimetallic strip
- c. a spring-activated relay
- d. an electromagnatic relay
- e. a photo-sensitive activating device

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14.



What do we call the part of this tool that is marked with an X?

- a. bit
- b. housing
- c. chuck
- d. reduction gear
- e. key

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15.



This tool is used by a mason for:

- a. making holes
- b. measuring thickness of walls
- c. cementing bricks
- d. examining the strightness of walls
- e. writing on the walls

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

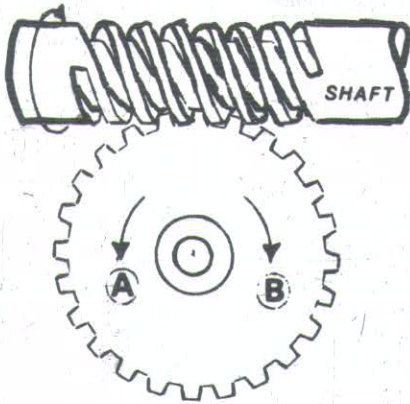
16. An *automobile carburettor*

- a. provides a coupling between front and rear wheels
- b. changes direct electrical current to alternating current
- c. allows the rear wheels to turn at a greater speed
- d. converts the up and down motion of the pistons
- e. allows the mixture of air and petrol

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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17.



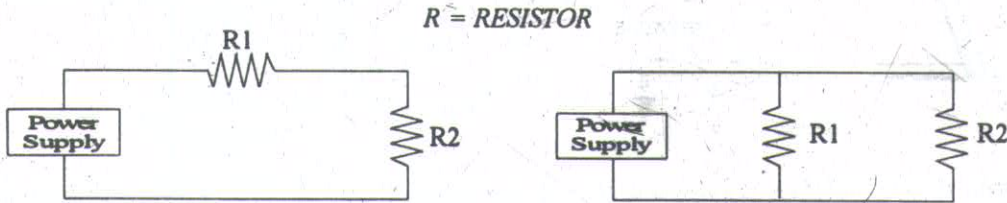
The *Shaft* in the picture cannot move from one side to other, but it can turn. As the shaft is turned in the direction shown by the arrow, which way will the gear turn?

- a. A
- b. B
- c. alternatively A and B
- d. first A, then B
- e. the gear will not turn

Mark Your Answers Here

a b c d e

18.

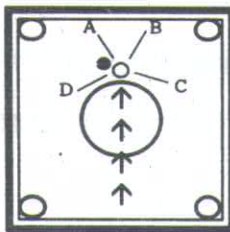


In which circuit is the voltage always the same across each resistor, regardless of the values of R1 and R2?

- a. A
- b. B
- c. both A and B
- d. neither A nor B
- e. it depends on the resistance

a b c d e

19.

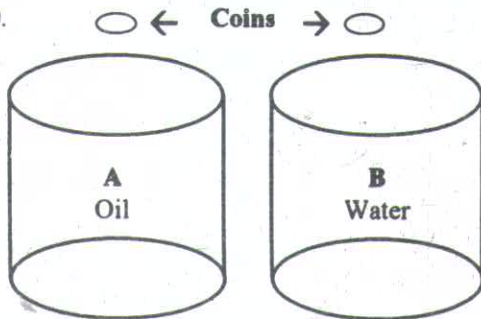


After hitting the black coin, which way is the striker likely to go on the carrom-board?

- a. A
- b. B
- c. C
- d. D
- e. it will rebound

a b c d e

20.



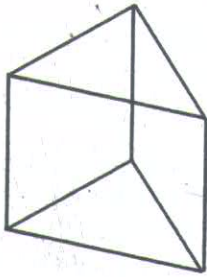
If same kind of coins are dropped in these two beakers, which coin will drown faster?

- a. A
- b. B
- c. both will take equal time
- d. coin in beaker A will float
- e. coin in beaker B will float

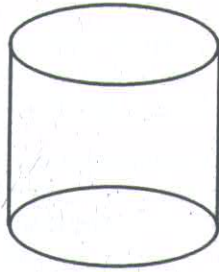
a b c d e

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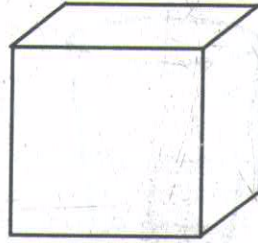
21. Which of these wooden boxes is the heaviest?



A



B



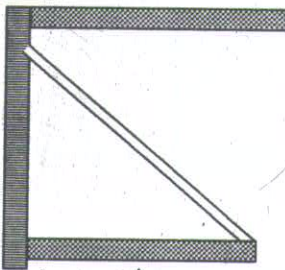
C

- a. A
- b. B
- c. C
- d. all are equal in weight
- e. B and C are the heaviest

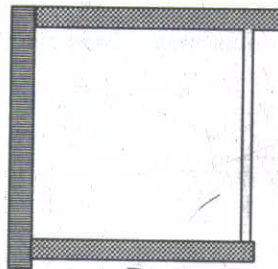
Mark Your Answers Here

a b c d e

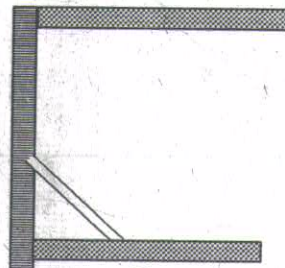
22. Which of these shelves will hold the maximum weight?



A



B



C

- a. A
- b. B
- c. C
- b. All will hold equal weight
- e. A and B will hold same weight

a b c d e

23. How will figure X will look in the mirror? Choose from the figures given below:

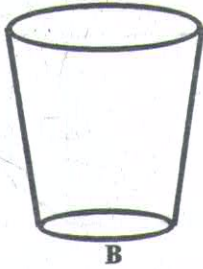


a b c d e

24. Which of these glass will break easily when poured with very hot liquid?



A



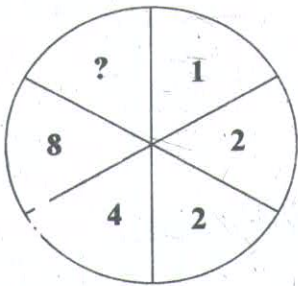
B

- a. A
- b. B
- c. both will break at the same time
- d. both can retain the hot liquid
- e. hot liquid cannot be poured in A

Mark Your Answers Here

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25.



Find out the missing number?

- a. 17
- b. 12
- c. 32
- d. 8
- e. 40

a	b	c	d	e
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

END OF TEST