

Measurement

1. What is the approximate width of a person's little finger?

- (1) 1 m (3) 0.01 m 1cm
(2) 0.1 m 10cm (4) 0.001 m 1mm

2. The mass of a high school football player is approximately

- (1) 10^0 kg 1 kg
(2) 10^1 kg 10kg
(3) 10^2 kg 100kg
(4) 10^3 kg 1000kg

3. What is the approximate mass of a pencil?

- (1) 5.0×10^{-3} kg 0.005 kg
(2) 5.0×10^{-1} kg 0.5 kg
(3) 5.0×10^0 kg 5kg
(4) 5.0×10^1 kg 50kg

4. Which measurement of an average classroom door is closest to 1 meter?

- (1) thickness (3) height
(2) width (4) surface area

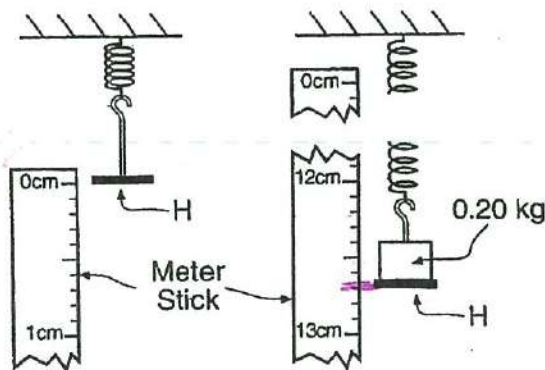
5. The thickness of one page of this test booklet is closest to

- (1) 10^{-4} m 0.0001 m (1mm)
(2) 10^{-2} m 0.01 m (1cm)
(3) 10^0 m 1m
(4) 10^2 m 100m

6. A mass of one kilogram of nickels has a monetary value in United States dollars of approximately

- (1) \$1.00 20
(2) \$0.10 2
(3) \$10.00 200
(4) \$1000.00 20000

7. What is the displacement of the mass hanger (H) shown in the diagram after a 0.20-kilogram mass is loaded on it? [Assume the hanger is at rest in both positions.]



Unloaded

Loaded

- (1) 12.30 cm
(2) 12.50 cm
(3) 12.70 cm
(4) 13.30 cm

8. The maximum time allowed for the completion of this examination is approximately (3 hr)

- (1) 10^2 s
(2) 10^3 s
(3) 10^4 s
(4) 10^5 s

9. Which object weighs approximately 1 newton?

- (1) dime (3) physics student
(2) paper clip (4) golf ball

10. The mass of a physics textbook is closest to

- (1) 10^3 kg 1000kg
(2) 10^1 kg 10kg
(3) 10^0 kg 1kg
(4) 10^{-2} kg 0.01kg

11. The height of a doorknob above the floor is closest to

- (1) 1 centimeter (3) 1 millimeter
(2) 1 meter (4) 1 kilometer

12. The area of this page of the test booklet is closest to

- (1) 0.6 cm^2 (3) 60 cm^2
(2) 6 cm^2 (4) 600 cm^2

13. A reasonable height for a chalk tray above the floor is closest to

- (1) 1 cm (3) 100 cm 1m
(2) 10 cm (4) 1,000 cm

14. The height of an average adult is approximately 1.75

- (1) cm (3) mm
(2) m (4) km

15. The thickness of a pencil is closest to

- (1) 1 mm (3) 1 m
(2) 1 cm (4) 1 km

16. What is the approximate diameter of a dinner plate?

- (1) 0.0025 m (3) 0.25 m
(2) 0.025 m (4) 2.5 m

17. The weight of an apple is closest to

- (1) 10^{-2} N 0.01N
(2) 10^0 N 1N
(3) 10^2 N 100N
(4) 10^4 N 10000N

18. The length of a high school physics classroom is probably closest to

- (1) 10^{-2} m 1cm
(2) 10^{-1} m 10cm
(3) 10^1 m 10meters
(4) 10^4 m 1000m

19. The thickness of a dollar bill is closest to

- (1) 10^{-4} m
(2) 10^{-2} m 1cm
(3) 10^{-1} m
(4) 10^1 m

20. The approximate mass of a nickel is

- (1) 0.0005 kg 0.5g
(2) 0.005 kg 5g
(3) 0.5 kg 500g
(4) 5 kg 5000g

21. To the nearest order of magnitude, how many times greater than the speed of sound is the speed of light?

- (1) 10^4 (3) 10^{10}
(2) 10^6 (4) 10^{12}

22. Which is the most likely mass of a high school student?

- (1) 1 kg (3) 60 kg
(2) 5 kg (4) 250 kg