

Part 5**Mathematics Knowledge**

Time: 24 minutes; 25 questions

Directions

This test is a test of your ability to solve general mathematical problems. Select the correct answer from the choices given and then mark the corresponding space on your answer sheet. Use scratch paper to do any figuring.

- $x^2 \times x^4 =$
(A) x^6
(B) x^8
(C) $2x^6$
(D) $2x^8$
- If a rectangle has a perimeter of 36 feet, and it's 4-feet wide, what's its area?
(A) 56 square feet
(B) 128 square feet
(C) 112 square feet
(D) 16 square feet
- The cube root of 64 is:
(A) 3
(B) 9
(C) 2
(D) 4
- Convert 314,000 to scientific notation.
(A) 3.14×10^5
(B) 3.14×10^{-5}
(C) 314×10
(D) 31.4×100
- The reciprocal of $\frac{1}{6}$ is:
(A) 1
(B) 3
(C) 6
(D) $\frac{1}{6}$
- If $0.05 \div x = 1$, then $x =$
(A) 0.05
(B) 0.5
(C) 50.0
(D) 5.0
- Factor $x^2 - 6x + 9$.
(A) $(x + 6)(x + 6)$
(B) $(x - 6)(x + 6)$
(C) $(x - 3)^2$
(D) $(x + 3)^2$
- $(3 \times 2)(7 - 2)(6 + 2) = (6 \times 4)x$. What's the value of x ?
(A) -5
(B) 5
(C) 10
(D) 1
- Solve for x : $2x - 6 = x + 5$
(A) 3
(B) 11
(C) 7
(D) 5
- If $I = prt$, and $p = \$1,000$, $r = 7\%$, and $t = 1$, what does I equal?
(A) \$35
(B) \$1,000
(C) \$700
(D) \$70

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11. Solve for x in the equation $(x - 7)^2 - 4 = (x + 1)^2$.

- (A) $2\frac{1}{2}$
- (B) $2\frac{3}{4}$
- (C) $4\frac{1}{2}$
- (D) $4\frac{3}{4}$

12. A circle has a radius of 5 inches. What's its approximate area?

- (A) 78.5 inches
- (B) 70.0 inches
- (C) 314.0 inches
- (D) 25.0 inches

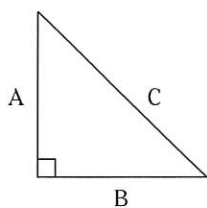
13. Solve the following inequity:

$$\frac{2}{3}(6x - 9) + 4 > 5x + 1$$

- (A) $x > 6$
- (B) $x < 6$
- (C) $x > -3$
- (D) $x < -3$

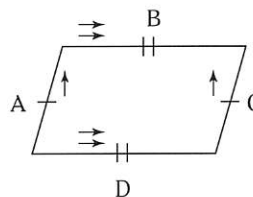
14. A tube has a radius of 3 inches and a height of 5 inches. What's its approximate volume?

- (A) 34 cubic inches
- (B) 141 cubic inches
- (C) 565 cubic inches
- (D) 45 cubic inches



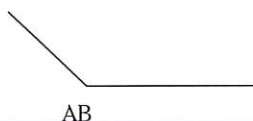
15. Triangle ABC (shown above) is a(n):

- (A) right triangle
- (B) equilateral triangle
- (C) scalene triangle
- (D) isosceles triangle



16. The figure above is what type of quadrilateral?

- (A) square
- (B) rhombus
- (C) trapezoid
- (D) parallelogram



17. Angle AB (shown above) is a(n):

- (A) complementary angle
- (B) supplementary angle
- (C) acute angle
- (D) obtuse angle

18. Solve for x : $-x^2 - x + 30 = 0$

- (A) 4, -8
- (B) -6, 5
- (C) -4, 5
- (D) 6, -3

19. A square box has a volume of 64 cubic inches. What's its perimeter?

- (A) 8 inches
- (B) 16 inches
- (C) 64 inches
- (D) 32 inches

20. A cube has a volume of 64 cubic inches. What's its surface area?

- (A) 16 square inches
- (B) 64 square inches
- (C) 96 square inches
- (D) 32 square inches

Part V: Practice ASVAB Exams

21. $(x^3)^3 = ?$

(A) $3x^3$

(B) x^6

(C) x^9

(D) $2x^6$

22. $4! =$

(A) 16

(B) 40

(C) 0

(D) 24

23. If $a^3 + b^3 = a^3 + x^3$, then $b =$

(A) $b^3 - a^3$

(B) x

(C) $a^3 - b^3$

(D) a

24. What's the sum of the integers from 1 to 300?

(A) 38,243

(B) 45,150

(C) 49,923

(D) 52,024

25. $(y^2)^3 =$

(A) y^5

(B) y^6

(C) y^3

(D) $3y^2$



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DO NOT RETURN TO A PREVIOUS TEST.