

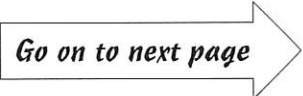
Part 4**Mathematics Knowledge**

Time: 24 minutes; 25 questions

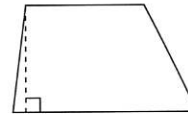
Directions

This section 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.


- Solve for x : $5x - 2x = 7x + 2x - 24$
 - 2
 - 2
 - 4
 - 4
- The cube of 6 is
 - 125
 - 225
 - 216
 - 238
- In the equation $3x + 7y = 21$, at what point is the x -axis intersected?
 - (7, 0)
 - (0, 7)
 - (0, 4)
 - (4, 0)
- $x + y = 6$ and $x - y = 4$. Solve for x .
 - 3
 - 5
 - 7
 - 8
- Solve for y : $4(y + 3) + 7 = 3$
 - 2
 - 2
 - 4
 - 4
- 12 yards + 14 feet \div by 2 =
 - 25 feet
 - 12 feet
 - 32 feet
 - 8 feet
- $x^3 \times x^3 =$
 - x^9
 - $2x^9$
 - $2x^6$
 - x^6
- $4\frac{1}{2} + 1\frac{2}{5} + 3\frac{3}{10} =$
 - $6\frac{1}{2}$
 - $8\frac{8}{10}$
 - $5\frac{1}{2}$
 - $7\frac{1}{2}$
- $1.5 \times 10^2 =$
 - 45
 - 150
 - 1,500
 - 15
- The average of 54, 61, 70, and 75 is:
 - 50
 - 52
 - 55
 - 58

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11. 2 feet 4 inches + 4 feet 8 inches =
(A) 6 feet 8 inches
(B) 7 feet
(C) 7 feet 2 inches
(D) 8 feet
12. If $x = 4$, then $x^4 \div x =$
(A) 12
(B) 36
(C) 64
(D) 72
13. Solve for x : $5 - 3x \geq 14 + 6x$
(A) $x \geq -1$
(B) $x \leq -1$
(C) $x > -1$
(D) $x < -1$
14. $(900 \times 3) \div 6 =$
(A) 45
(B) 450
(C) 55
(D) 550
15. If $x = 2$, then $x^x \times x^x =$
(A) 16
(B) $2x^x$
(C) 8
(D) 24
16. Solve for x : $x^2 - 2x - 15 = 0$
(A) 4, -2
(B) 3, -3
(C) 5, -3
(D) -1, 1
17. $\sqrt{49} \div \sqrt{64} =$
(A) $\frac{1}{4}$
(B) $\frac{1}{2}$
(C) $\frac{1}{3}$
(D) $\frac{1}{8}$
18. If $5y^2 = 80$, y is:
(A) a positive number
(B) a negative number
(C) either a positive or negative number
(D) an imaginary number
19. If $2 + x \geq 15$, what's the value of x ?
(A) $x < 13$
(B) $x > 13$
(C) $x \geq 13$
(D) $x \leq 13$
20. If a circle has a radius of 15 feet, what is its circumference most nearly?
(A) 24 feet
(B) 72 feet
(C) 94 feet
(D) 36 feet
21. What's the volume of a box measuring 12-inches long by 8-inches deep by 10-inches high?
(A) 960 cubic inches
(B) 128 cubic inches
(C) 42 cubic inches
(D) 288 cubic inches



22. The figure above is a(an):
(A) parallelogram
(B) obtuse triangle
(C) trapezoid
(D) rectangle
23. The sum of the measures of the angles of a parallelogram is:
(A) 360 degrees
(B) 540 degrees
(C) 180 degrees
(D) 720 degrees

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24. What is the prime factorization of 100?
- (A) 2×50
 - (B) $2^2 \times 5^2$
 - (C) 4×25
 - (D) 25^2
25. $\sqrt{-9}$ is an example of a(an):
- (A) real number
 - (B) imaginary number
 - (C) irrational number
 - (D) sloping number



DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.
DO NOT RETURN TO A PREVIOUS TEST.