



ACT Math — Full-Length Practice Test (60 Questions)

1. If $3x + 7 = 25$, what is x ?
2. A rectangle has width 5 and area 45. What is its length?
3. What is the slope of the line passing through (2,3) and (6,15)?
4. Simplify: $(x^2 - 9) / (x - 3)$, $x \neq 3$.
5. If $f(x) = 2x - 5$, what is $f(8)$?
6. The mean of 5 numbers is 12. If four of the numbers are 10, 11, 13, and 9, what is the fifth number?
7. A company sells 12 pens for \$9. What is the cost per pen?
8. Solve: $|x - 4| = 7$.
9. What is the area of a triangle with base 14 and height 6?
10. Convert 3.2×10^3 to standard form.
11. On a coordinate plane, what is the distance between (1,2) and (5,5)?
12. If $g(x) = x^2 - 4x$, what is $g(3)$?
13. Solve for x : $5x - 12 > 3$.
14. A store discount reduces a \$80 item by 15%. What is the sale price?
15. What is the value of $\sqrt{50}$?
16. If $(x - 3)(x + 5) = 0$, what are the solutions?
17. A circle has radius 9. What is its circumference?

18. What is the median of the set $\{4, 7, 9, 11, 15, 20\}$?
19. If $f(x) = 3x^2$ and $f(k) = 75$, find k .
20. What is the slope of $y = -2x + 7$?
21. A right triangle has legs of lengths 8 and 15. What is the hypotenuse?
22. If $\frac{3}{4}$ of x is 24, what is x ?
23. Solve: $2^{(x+1)} = 16$.
24. If the ratio of boys to girls is 5:7 and there are 35 boys, how many girls?
25. What is the volume of a rectangular prism with dimensions $3 \times 4 \times 10$?
26. Simplify: $(3x^3)(2x^2)$.
27. If points $A(2,5)$ and $B(10,y)$ have slope 3, what is y ?
28. A spinner has 8 equal sections. What is the probability of landing on one specific section?
29. Factor: $x^2 + 7x + 12$.
30. If $\sin\theta = \frac{3}{5}$ in a right triangle, what is $\cos\theta$?
31. What is the solution to $4x + 1 = 9$?
32. A line has slope 4 and passes through $(0,-3)$. What is its equation?
33. If $f(x) = \frac{x}{2} - 6$, what is $f(-4)$?
34. Simplify: $(x^{\blacksquare})/(x^2)$.
35. A sequence starts 2, 5, 8, 11... What is the 20th term?
36. If a box contains 3 red, 5 green, and 2 blue marbles, what is the probability of drawing a green?
37. What is the area of a circle with diameter 12?
38. Solve: $x^2 - 16 = 0$.

39. The average of x and 14 is 20. Find x .
40. If 30% of a number is 45, what is the number?
41. Solve the system: $x + y = 16$ and $x - y = 4$.
42. Expand: $(x + 3)^2$.
43. Convert 0.0045 into scientific notation.
44. A triangle has sides 6, 8, and 10. Is it a right triangle?
45. If the perimeter of a square is 48, what is the length of one side?
46. What is the range of the set $\{12, 15, 3, 8, 20\}$?
47. Solve for x : $7x - 14 = 0$.
48. If k varies directly with m and $k=18$ when $m=6$, find k when $m=10$.
49. What is $\sqrt{(81/25)}$?
50. If a car travels 150 miles in 3 hours, what is its average speed?
51. Solve: $3^x = 27$.
52. What is the y -intercept of $y = 5x - 12$?
53. Evaluate $h(4)$ for $h(x)=x^2-2x+1$.
54. A polygon has interior angle sum 1260° . How many sides does it have?
55. What is the midpoint between $(-2,7)$ and $(4,-1)$?
56. Solve: $\sqrt{x+9} = 6$.
57. If a bag contains 12 items and 3 are defective, what percent are defective?
58. Simplify: $(2x - 3) - (x + 5)$.
59. A circle has area 49π . What is its radius?
60. If a function increases by a constant amount each step, what type of function is it?

Prepared by ChatGPT for Math Tutoring AI