**Math Placement Test**

1. 0.72 × 2.1 =
2. 5.8 + 1.6 =
3. 10 – 7.33 =
4. 9.5 ÷ 2.5 =
5. 1/5 + 1/3 =
6. 4/5 – 2/7 =
7. 2/6 ÷ 8/3 =
8. 5 × [19 – 3(4)] =
9. A swimming pool is 5 meters wide and 17 meters long. At $11 per meter, how much will fencing around the outside of the pool cost?
10. 6 – 42 ÷2(–4) =
11. Evaluate the expression 4a2b if a = –2 and b = –4.
12. Simplify by combining like terms: 2(2x + y) – 2(x – 3y) =
13. 3–2
14. Solve for x: x – 5 = – (4 – 2x)
15. The slope of the line through the points (–4, 2) and (0, 1) is:
16. Multiply: (2x – 5)(2x + 5) =
17. –(–3a)4
18. One of the factors of 6y2 + y is:
19. $\sqrt{18}+\sqrt{8}= $
20. Solve the inequality for x: 3x + 4 > 7
21. Solve the inequality for x: 6 – 2(3 – x) < 3x + 5
22. Simplify: $\frac{\left(x^{2}\right)^{5}}{x^{2}x^{5}}$ =
23. $\sqrt{d}+\sqrt{d}=$
24. $\sqrt{9x^{3}z}=$
25. If I = rP, then P =
26. If 3x – 2y =z, then y =
27. If 4x – 3y = 12, then the y-intercept of the graph of this equation is:
28. Reduce: $\frac{3x-9}{ x^{2}-3x }$ =
29. Factor: 3x2 – 12 =
30. Add: $\frac{2}{ y }+\frac{5}{ y }$ =
31. Subtract: $\frac{2b}{a}– \frac{3a}{b}= $
32. Multiply: $\frac{x}{ 2 }·\frac{4}{ y }$ =
33. Divide: $\frac{x^{2}+2x}{3}÷\frac{x^{2}+3x+2}{6}$ =
34. One of the roots of $x^{2}-x -1=0$ is:
35. The graph of y = 3 is a: (a) line; (b) horizontal line; (c) vertical line; (d) parabola; (e) circle; (f) ellipse; (g) hyperbola; (h) none of the above.
36. The graph of x2 + y2 = 9 is a: (a) line; (b) horizontal line; (c) vertical line; (d) parabola; (e) circle; (f) ellipse; (g) hyperbola; (h) none of the above.
37. Simplify: $\frac{2 – \frac{x}{ y }}{ 2 + \frac{x}{ y }}$ =
38. If 3a + 2b – 4ab = 8, then b =
39. Solve for x: log327 = x
40. Solve for x: |x – 3| > 2
41. Find f(–1) if f(x) = 2x + 1
42. The graph of 3x –y = 2 and y = 2x –1 intersect at what point?
43. Which equation best describes this graph
44. A square lot has an area of 200 square feet. If *w* represents the length of a side, then an equation that can be used to determine the value of *w* is:
45. If 2x = 8, then the exact value of x is:
46. If f(x) = 3x – 1 and g(x) = x2 + 3, then f(g(x)) =
47. For an angle of $\frac{2π}{9}$ radians in standard position, the terminal side of the angle lies in which quadrant?
48. On the figure shown below, cos *α* =
49. Suppose *θ* is an angle in standard position with terminal side in the second quadrant. If cos *θ* = – $\frac{4}{ 5 }$ , then sin *θ* =
50. The vertex of the parabola y = x2 is at:
51. The vertex of the parabola 2x2 – 8x –y–3 = 0 is at: