**PRACTICE PERT TEST – ALGEBRA PORTION**

1. Multiply: 2(x + 3)
2. 2x + 3
3. 2x + 6
4. x + 6
5. 2x + 5
6. Simplify by clearing parentheses and combining like terms: 8k – 4(k – 1) + 7 – k
7. 3k + 11
8. k – 11
9. k – 3
10. 3k – 11
11. Solve the equation: q – 14 = 6
12. q = 8
13. q= -8
14. q = 20
15. q= -20
16. Which of the following is the solution to the equation c + (4 – 3c) – 2 = 0
17. -1
18. 1
19. 0
20. 2
21. What is the solution y – 2 > 1
22. (3, infinity)
23. (-infinity, infinity)
24. (3, -3)
25. [3, infinity)
26. Which of the following is a solution to x² - 6x + 5 = 0?
27. x = -1
28. x = 5
29. x = -5
30. x = $\frac{1}{5}$
31. Factor: x² + x – 12
32. (x – 6)(x + 2)
33. (x + 6)(x – 2)
34. (x + 3)(x – 4)
35. (x + 4)(x – 3)
36. (x – 4)(x – 3)
37. Simplify the following expression: $\frac{3x⁴y²}{xy²}$
38. 3x²y
39. 3x⁴y²
40. 3x³
41. 3x⁴y
42. What is the value of the algebraic expression 6x(y²)z, if x = $\frac{1}{2}$, y = -1, and z = 2
43. 1
44. 12
45. 6
46. -6
47. Which of the following is equivalent to the expression (3ab)(-5ab)?
48. -2ab
49. -15ab
50. -15a²b²
51. -2a²b²
52. If $\frac{4a}{2}=12$, then a =?
53. 2
54. 1
55. 6
56. 8
57. -2(3x – 4y)
58. 2xy
59. -6x + 8y
60. -6x – 8y
61. 24xy
62. -6x – 4y
63. If x = 5, then -4x² + 6x – 3 =
64. 427
65. -88
66. -73
67. -67
68. -13
69. Simplify: $\frac{n+3}{n^{2}+3n}$
70. $\frac{3}{n+5}$
71. $\frac{1}{n+5}$
72. $\frac{1}{n²}$
73. $ \frac{1}{2n}$
74. $\frac{1}{n}$
75. Simplify: (-5x⁶y)(7x⁴y⁵)
76. -35$x^{10}$y⁶
77. 35$x^{24}$y⁵
78. 2$x^{10}$y⁶
79. 35$x^{10}$y⁶
80. -35$x^{24}$y⁵
81. (x – 3)² =
82. x² - 3x + 9
83. x² + 3x + 9
84. x² - 6x + 9
85. x² - 6x – 9
86. Solve for n: 6 + 5n = t
87. t – 11
88. t - $\frac{6}{5}$
89. t + 1
90. $\frac{t+6}{5}$
91. $\frac{t-6}{5}$
92. Evaluate the expression $\frac{3a+2b}{2}$ when a = -3 and b = -4
93. $-\frac{1}{2}$
94. $-\frac{17}{2}$
95. $ \frac{1}{2}$
96. $\frac{17}{2}$
97. Evaluate: $\frac{3x-y}{6z-x}$, if x = 1, y = -4, and z = 6
98. $\frac{1}{7}$
99. $-\frac{1}{7}$
100. $ \frac{1}{5}$
101. $-\frac{1}{5}$
102. Simplify: 8y – 2 -3(y – 4)
103. 5y + 10
104. 11y – 6
105. 5y – 6
106. 5y – 14



1.
2. Write the fraction in lowest terms: $\frac{36a³bc²}{24ab⁴c²}$
3. $\frac{3b³}{2a³}$
4. $\frac{2b³}{2a²}$
5. $\frac{3a²}{2b³}$
6. $\frac{2a²}{3b³}$
7. Subtract the polynomials: (9x² - 4x + 11) – (3x² - 2x + 2)
8. 6x² -2x + 13
9. 6x² -6x + 13
10. 6x² -2x + 9
11. 6x² -6x + 9
12. (x + 2)(x² - 2x + 4) =
13. x³ - 4x² + 8x + 8
14. x³ + 8
15. x³ + 8x + 8
16. x³ + 4x² - 8x + 8
17. Multiply: 2x(3x² - 5x – 3)
18. 6x³ - 10x² - 3x
19. 6x³ - 5x² - 6x
20. 6x³ - 10x² - 6x
21. 6x³ - 5x - 3



1.
2. Divide: $\frac{14m^{2}-28m^{8}+7m}{7m}$
3. 2m² - 4m⁸ + m
4. 2m - 28m⁸ + 7m
5. 2m - 4m⁷ + 1
6. 2m – 4m⁷
7. Which of the following is a factor of 12x⁴ - 20x³ + 4x²
8. 4x⁴
9. x – 1
10. 3x² - 5x + 1
11. 3x + 1
12. Factor completely: x² - x - 6
13. (x – 1)(x– 6)
14. (x – 2)(x + 3)
15. (x + 1)(x – 6)
16. (x + 2)(x – 3)
17. Solve 2x < x – 4 ≤ 3x + 8
18. -6 ≤ x $<$ 4
19. -4 ≤ x $< $4
20. -4 ≤ x $<$ 6
21. -6 ≤ x $<$ -4





1.
2. Solve: -2(x + 4) > 1 – 5x
3. x > -3
4. x < 3
5. x < -3
6. x > 3
7. Find the x and y intercepts of the equation 3x + 4y = 12
8. (4, 0) and (0, 3)
9. (0, 3) and (0, 4)
10. (4, 0) and (3, 0)
11. (3, 0) and (0, 4)
12. Find the x and y intercepts of 25x² + 4y² = 9
13. x intercepts are ($ \frac{3}{5}, 0)$ and ($-\frac{3}{5}, 0)$, and y intercepts are (0, $\frac{3}{2}$ ) and (0, - $\frac{3}{2} $)
14. x intercepts are (5, 0) and (-5, 0) and y intercepts are (0, 3) and (0, -3)
15. x intercepts are ($3, 0)$ and ($-\frac{3}{5}, 0)$, and y intercepts are (0, $3$ ) and (0, - $\frac{3}{2} $)
16. x intercepts are ($ \frac{3}{5}, 0)$ and ($-\frac{3}{5}, 0)$, and there are no y-intercepts