PERT MATH
PRACTICE TEST

DO NOT **USE A CALCULATOR WHILE WORKING ON THIS PRACTICE TEST. CALCULATORS ARE ONLY ALLOWED ON VERY FEW PROBLEMS ON THE MATH SECTION OF THE ACTUAL PERT PLACEMENT TEST.**

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1. MA.912.A.1.1

Evaluate: $2xy^2 - 3xy - 7$ if $x = -4$ and $y = 5$.

a. –147

b. –133

c. 233

d. 1653

2. MA.912.A.3.1

Solve for y: $4-(y-5)-(y+3)=2$

a. $-\frac{25}{2}$

b. –5

c. 2

d. $\frac{19}{5}$

3. MA.912.A.1.1

Simplify: $6-4[3(2x+5)-4x]$

a. $4x + 30$

b. $8x + 30$

c. $8x + 42$

d. $-8x - 54$

4. MA.912.A.3.1

Solve for x: $0.2(2x - 1) = 0.2x + 0.08$

a. 1.4

b. 5

c. –2

d. $0.\bar{3}$

5. MA.912.A.3.4

Find all solutions of $5 - 2x + 7 \geq 6$.

a. $x \geq -3$

b. $x \leq 3$

c. $x \geq 3$

d. $x \leq -3$

6. MA.912.A.3.1

Solve the formula $3x + 4y = 12$, for y.

a. $4y = 12 - 3x$

b. $y = \frac{9}{4}$

c. $y = -3x - 8$

d. $y = -\frac{3}{4}x + 3$

7. MA.912.A.5.4

Solve the equation: $\frac{x-4}{x} = \frac{3}{5}$

a. $x = -5$

b. $x = -6$

c. $x = 10$

d. $x = 2$

8. MA.912.A.1.4

Set up the equation that can be used to solve the following: "Eight less than the square of a number is the same as adding the number and four." *Use x to represent the unknown number.*

a. $8 - x^2 = x + 4$

b. $x^2 - 8 = x + 4$

c. $2x - 8 = x + 4$

d. $8 - 2x = x + 4$

9. MA.912.A.3.15

The perimeter of a rectangular swimming pool is 30 meters. The width of the pool is 3 meters less than its length; find the width of this swimming pool.

a. 10 meters

b. 9 meters

c. 6 meters

d. 3 meters

10. MA.912.A.1.1

Jose books for the semester cost $432.00. How much tax will he pay if the tax rate is 7%?

a. $61.71

b. $28.00

c. $302.40

d. $30.24

11. MA.912.A.4.1

Simplify: $(-8x^4y^3)(-6xy^{-7})$

a. $-48x^4y^{-7}$

b. $-48x^4y^{-10}$

c. $\frac{48x^5}{y^4}$

d. $\frac{-48x^4}{y^3}$

12. MA.912.A.1.1

Write the number 37,120,000 using scientific notation.

a. 3.712×10^7

b. 3.712×10^{-7}

c. 37.12×10^{-7}

d. 37.12×10^6

13. MA.912.A.4.4

Divide: $\frac{9x^2y - 12xy^2 + 3xy}{3xy}$

a. $6x - 9y$

b. $3x - 4y$

c. $3x - 4y + 1$

d. $3x^2 - 4y + xy$

14. MA.912.A.4.2

Subtract: $(7x^3 - 6x^2 + 2x) - (5x^2 + 8x - 3)$

a. $7x^3 - 11x^2 - 6x + 3$

b. $-3x$

c. $7x^3 - 11x^2 + 10x - 3$

d. $-4x^3 + 10x - 3$

15. MA.912.A.4.2

Multiply: $(2m-5n)(4m+n)$

a. $8m^2-5n^2$

b. $8m^2-18mn-5n^2$

c. $8m^2+5n^2$

d. $8m^2+18mn+5n^2$

16. MA.912.A.4.2

Multiply: $(4n-3)^2$

a. $16n^2+9$

b. $16n^2-24n+9$

c. $16n^2-9$

d. $8n^2-6$

17. MA.912.A.4.2

Find the product for $(2k^2-6k+9)(k+3)$

a. $2k^3-12k^2+9k+27$

b. $2k^3-9k+27$

c. $2k^3-12k^2-27k-27$

d. $2k^3+9k^2-9k-27$

18. MA.912.A.4.3

Factor completely: $4x^2-16$

a. $(2x-4)(2x+4)$

b. $(2x+4)(x-4)$

c. $4(x-2)(x+2)$

d. $(2x-4)(x+4)$

19. MA.912.A.4.3

Factor completely: $9x^2-6x+4$

a. $(3x-2)^2$

b. $(3x+2)^2$

c. $(3x-2)(3x+2)$

d. $(9x-2)(x-2)$

20. MA.912.A.4.3

Factor completely: $4x^3+12x^2+x+3$

a. $(x+3)(4x^2+1)$

b. $4x^2(x+3)$

c. $4(x-3)(4x^2-1)$

d. $(x+3)(2x+1)^2$

21. MA.912.A.4.3

What is one factor of the trinomial $3x^2-2x-8$?

a. $x+2$

b. $3x-2$

c. $x-8$

d. $3x+4$

22. MA.912.A.7.2

What is one solution of $4a^2+20a=0$?

a. $a=-20$

b. $a=-5$

c. $a=4$

d. $a=5$

23. MA.912.A.7.2

Solve the equation: $x^2 - 10x + 24 = 0$

a. $x = -12$ *or* 2

b. $x = -6$ *or* -4

c. $x = 6$ *or* 4

d. $x = 2$ *or* 12

24. MA.912.A.4.4

Simplify: $\dfrac{x^2 - 4x + 4}{x^2 - 5x + 6}$

a. $\dfrac{4x + 4}{5x + 6}$

b. $\dfrac{x + 2}{x + 3}$

c. $\dfrac{2}{3}$

d. $\dfrac{x - 2}{x - 3}$

25. MA.912.A.6.1

Simplify: $\sqrt{27a^8b^7}$

a. $3a^4b^3\sqrt{3b}$

b. $3a^2b^3\sqrt{3a^2b}$

c. $3a^3b^3\sqrt{3}$

d. $-3a^2b^3\sqrt{3a^2b}$

26. MA.912.A.3.3

Solve the formula $A = 10 + ry$ for y.

A. $y = \dfrac{A - 10}{r}$

B. $y = \dfrac{A + 10}{r}$

C. $y = A - 10 - r$

D. $y = A - 10\,r$

27. MA.912.A.3.14

Solve the system of two equations for y:

$$x + y = 8$$
$$2x - y = 10$$

a. $y = -4$

b. $y = 6$

c. $y = 4$

d. $y = 2$

28. MA.912.A.3.9

Find the x-intercept for the graph:
$4x - 3y = -12$

a. $(4, -3)$

b. $(-3, 0)$

c. $(0, -3)$

d. $(-3, 4)$

29. MA.912.A.3.9

Find the slope, m, of the line passing through the points $(-4, -3)$ and $(0, -2)$

a. $m = -\dfrac{2}{3}$

b. $m = 8$

c. $m = -4$

d. $m = \dfrac{1}{4}$

30. MA.912.A.3.7

Find the standard form of the equation of a line that passes through the points $(1, 3)$ and $(-2, 5)$.

a. $y = 4x - 3$

b. $2x + 3y = 11$

c. $y = -\dfrac{4}{3}x - 1$

d. $2x - 3y = -4$