

Name: _____

Date: _____

MPM 1DR - Polynomials Practice Test

INSTRUCTIONS:

- 1) Using **pencil**, complete all work on the test paper.
- 2) Show all your work. MARKS WILL BE DEDUCTED FOR POOR FORM OR PRESENTATION.
- 3) **Good luck!**

Multiple Choice/Fill in the Blanks

For each question, select the best answer.

1. Which expression does this simplify to?
 $2(3x - 5) - 4(x - 3)$
A $10x - 3$
B $2x - 17$
C $10x - 17$
D $2x + 3$
E $2x + 2$
2. What is the value of $\left(\frac{-6}{5}\right)^2$?
A $\frac{36}{25}$
B $\frac{12}{10}$
C $-\frac{36}{25}$
D $-\frac{12}{10}$
3. What is the result when $(m^6)^3 \div m^2$ is simplified?
A m
B m^7
C m^{16}
D m^{11}
4. What is the value of $(3^2)^4$?
A 6561
B 1296
C 729
D 9
5. What is the value of $\frac{3^6}{3^3}$?
A 1
B 3
C 9
D 27
6. Which group has 3 like terms?
A $4b$ $3a$ $2b$
B $2x$ $2y$ $2z$
C $3x^2y$ $-x^2y$ $4xy^2$
D $-mn^2$ $4mn^2$ $-5mn^2$
7. The expression $3a^2 + 2a^3 + b$ is a:
A monomial
B binomial
C trinomial
D term
8. The degree of $6x^4y + xy^3 + 1$ is:
A 2
B 3
C 4
D 5
9. $4a + 2b - a - 3b$ can be simplified to:
A $3a - b$
B $5a - 5b$
C $3a - 5b$
D $3a + b$

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10. Match each expression/term in Column I with an appropriate example from Column II. You may choose to use one answer from Column II more than once or not at all.

Column I

Column II

a) degree three _____

A. $3x^2 + 5y$

b) binomial _____

B. $3x^4 + 5y - 3$

c) constant _____

C. the "5" in $3x^2 + 5y$

d) one term _____

D. $3x^5$

e) coefficient _____

E. $6x^2y$

f) trinomial _____

F. 5

Short Response

11. Write as a single power, then evaluate.

a) $(-1)^4 \times (-1)^5 \div (-1)^6$

b) $\frac{8^7 \times 8^3}{(8^2)^4}$

12. Simplify.

a) $\frac{v^9 \times v}{v^3}$

b) $(b^3)^3 \times 2b^5$

c) $-12m^3n^2 \div 3mn^2$

d) $(-4x^2y^5)^3$

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13. Simplify.

a) $(3x - 1) + (4 - 2x)$

b) $(2 + y) - (3 - 2y)$

14. Expand and simplify.

a) $5(p + 3) + 4(p - 6)$

b) $6[x - (2x + 1)]$

15. Evaluate when $x = -1$ and $y = 3$

a) $-4x - 6y$

b) $3x^5$

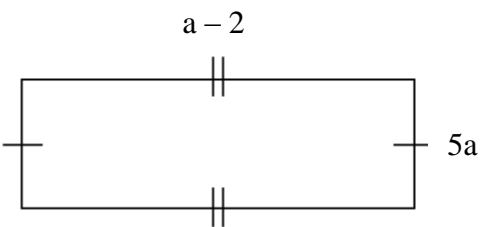
c) $5y^2 - 6x^3$

17. A rectangular field has a length of $a - 2$ meters and a width of $5a$ meters.

a) Determine a **simplified expression** that represents the perimeter of this field.

b) Determine a **simplified expression** that represents the area of this field.

(*Hint*: Use your knowledge of area, perimeter, polynomials, and collecting like terms)



18. Expand and simplify

$3x(x^2 - 2x + 7) - 2x(x - 1) - 5(2x - 1)(3x)$