

3.4 – Communicate With Algebra Worksheet

MPM1D

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1. Identify the coefficient and variable part for each term

Term	Coefficient	Variable
a) $2y$		
b) $-3x$		
c) mn		
d) $\frac{1}{2}x^2$		
e) $-w^2$		
f) $-0.4gh^3$		

2. $7x^2 + 3xy + 4y^2$ is a:

A) monomial

B) binomial

C) trinomial

D) term

3. Classify each polynomial by the number of terms.

a) $-2x$

b) $6y^2 + 2y - 1$

c) $a - \frac{1}{2}b$

d) $3u^2 - uv + 2v^2$

e) $3k^2 - \frac{1}{2}k$

f) $m + 0.2n - 0.3 + mn$

4. The degree of $4u - 5u^2 + 9$ is:

A) 1

B) 2

C) 3

D) 4

5. State the degree of each term.

a) $5x^2$

b) $-6y$

c) -3

d) u^2v^4

e) $\frac{1}{3}x^2y^3$

f) $0.2a^2b$

6. State the degree of each polynomial.

a) $3x - 4$

b) $y^2 + 3y - 1$

c) $m - 2m^3$

d) $a^3b^2 - 8a^2b^5$

e) $2x^2y^4 - \frac{2}{5}xy^3$

7. In a TV trivial show, a contestant receives 500 points for a correct answer and loses 200 points for an incorrect answer. Let c represent the number of correct answers and i represent the number of incorrect answers. Which expression describes a contestant's total points?

A) $500c + 200i$

B) $500c - 200i$

C) $500i + 200c$

D) $500i - 200c$

8. Substitute the given values and evaluate each expression.

a) $3x + 5$ if $x = 5$

b) $4y + 4$ if $y = -2$

c) $a^2 + 2b - 7$ if $a = 4, b = 1$

d) $2m^2 - 3n + 8$ if $m = -2, n = 5$

9. Meredith has a summer job at a fitness club. She earns a \$5 bonus for each student membership and a \$7 bonus for each adult membership she sells.

a) Write a polynomial expression that describes Meredith's total bonus.

b) Identify the variable and the coefficient of each term and explain what they mean.

Term	Variable	Coefficient	Meaning

c) How much will Meredith's bonus be if she sells 12 student memberships and 10 adult memberships?

10. An arena charges \$25 for gold seats, \$18 for red seats, and \$15 for blue seats.

a) Write an expression that describes the total earnings from seat sales.

b) Identify the variable and the coefficient of each term and explain what they mean.

Term	Variable	Coefficient	Meaning

c) How much will the arena earn if it sells 100 gold seats, 200 blue seats, and 250 red seats?

11. On a multiple-choice test, you earn 2 points for each correct answer and lose 1 point for each incorrect answer.

a) Write an expression for a student's total score.

b) Maria answered 15 questions correctly and 3 incorrectly. Find Maria's total score.

Answers:

1a) 2 ; y b) -3 ; x c) 1; mn d) $\frac{1}{2}$; x^2 e) -1 ; w^2 f) -0.4 ; gh^3

2) C: Trinomial

3) a) monomial b) trinomial c) binomial d) trinomial e) binomial f) 4-term polynomial

4) B: 2

5) a) 2 b) 1 c) 0 d) 6 e) 5 f) 3

6) a) 1 b) 2 c) 3 d) 7 e) 6

7) B

8) a) 20 b) -4 c) 11 d) 1

9) a) $5s + 7a$

b)

Term	Variable	Coefficient	Meaning
$5s$	s	5	Number of student memberships she sells
$7a$	a	7	Number of adult memberships she sells

c) \$130

10) a) $25g + 18r + 15b$

b)

Term	Variable	Coefficient	Meaning
$25g$	g	25	Number of gold seats sold
$18r$	r	18	Number of red seats sold
$15b$	b	15	Number of blue seats sold

c) \$10 000

11) a) $2c - w$ b) 27