

Name : \_\_\_\_\_

## Analyzing Polynomials

Sheet 1

Answer the following questions.

1)  $7y^5 - 3y^3 + 10y - 11y^3 - 19y^2 + 2y$

a) What is the leading coefficient of the given polynomial? \_\_\_\_\_

b) List down the pairs of like terms for the given polynomial. \_\_\_\_\_

c) Identify the degree of the polynomial. \_\_\_\_\_

d) Evaluate the polynomial at  $y = 2$ . \_\_\_\_\_

e) What is the coefficient of  $y^3$ ? \_\_\_\_\_

2)  $-3p^2 - p^2q + 5q - p^2$

a) What is the coefficient of  $p^2$ ? \_\_\_\_\_

b) Identify the degree of the polynomial. \_\_\_\_\_

c) What is the leading coefficient of the given polynomial? \_\_\_\_\_

d) List down the pairs of like terms for the given polynomial. \_\_\_\_\_

e) Evaluate the polynomial at  $p = -2$  and  $q = 1$ . \_\_\_\_\_

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## Answer key

# Analyzing Polynomials

Sheet 1

Answer the following questions.

1)  $7y^5 - 3y^3 + 10y - 11y^3 - 19y^2 + 2y$

a) What is the leading coefficient of the given polynomial? 7

b) List down the pairs of like terms for the given polynomial.  $-3y^3$  and  $-11y^3$ ,  $10y$  and  $2y$

c) Identify the degree of the polynomial. 5

d) Evaluate the polynomial at  $y = 2$ . 60

e) What is the coefficient of  $y^2$ ? -19

2)  $-3p^2 - p^2q + 5q - p^2q$

a) What is the coefficient of  $p^2$ ? -1

b) Identify the degree of the polynomial. 4

c) What is the leading coefficient of the given polynomial? 6

d) List down the pairs of like terms for the given polynomial.  $-3p^2$  and  $-p^2$ ,  $5q$  and  $-2q$

e) Evaluate the polynomial at  $p = -2$  and  $q = 1$ . 12

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## Analyzing Polynomials

Sheet 2

Answer the following questions.

1)  $12abc - 2 - 5ab^3c - 8b^2c^2 - a + 9 - 4b^2c^2$

a) Identify the degree of the given polynomial. \_\_\_\_\_

b) Write down a pair of like terms for the given polynomial. \_\_\_\_\_

c) Evaluate the polynomial. \_\_\_\_\_

d) What is the coefficient of the given polynomial? \_\_\_\_\_

e) What is the leading coefficient of the given polynomial? \_\_\_\_\_

2)  $3x^2 + x^3 - 5x^2 + 8 + 2x$

a) Evaluate the polynomial. \_\_\_\_\_

b) What is the coefficient of the given polynomial? \_\_\_\_\_

c) Identify the degree of the given polynomial. \_\_\_\_\_

d) What is the leading coefficient of the given polynomial? \_\_\_\_\_

e) Write down a pair of like terms for the given polynomial. \_\_\_\_\_

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## Answer key

# Analyzing Polynomials

Sheet 2

Answer the following questions.

1)  $12abc - 2 - 5ab^3c - 8b^2c^2 - a + 9 - 4b^2c^2$

a) Identify the degree of the given polynomial.

5

b) Write down a pair of like terms for the given polynomial.

$-8b^2c^2$  and  $-4b^2c^2$

c) Evaluate the polynomial.

-56

d) What is the coefficient of the given polynomial?

12

e) What is the leading coefficient of the given polynomial?

-5

2)  $3x^2 + x^3 - 5x^2 + 8 + 2x$

a) Evaluate the polynomial.

158

b) What is the coefficient of the given polynomial?

-7

c) Identify the degree of the given polynomial.

4

d) What is the leading coefficient of the given polynomial?

2

e) Write down a pair of like terms for the given polynomial.

$3x^2$  and  $-5x^2$

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## Analyzing Polynomials

Sheet 3

Answer the following questions.

1)  $8pq - 4p - 9 + 11p - 17$

a) Write down a pair of like terms for the given polynomial. \_\_\_\_\_

b) Evaluate the polynomial at  $p = 3$  and  $q = 4$ . \_\_\_\_\_

c) What is the coefficient of  $p$  in the given polynomial? \_\_\_\_\_

d) What is the leading coefficient of the given polynomial? \_\_\_\_\_

e) Identify the degree of the given polynomial. \_\_\_\_\_

2)  $6tu - v^4 + 2u^3 - 7v^4 + 3$

a) Identify the degree of the given polynomial. \_\_\_\_\_

b) List down the terms of the given polynomial. \_\_\_\_\_

c) Evaluate the polynomial at  $t = 0$ ,  $u = 2$  and  $v = -1$ . \_\_\_\_\_

d) What is the coefficient of  $u^3$  in the given polynomial? \_\_\_\_\_

e) What is the leading coefficient of the given polynomial? \_\_\_\_\_

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## Answer key

# Analyzing Polynomials

Sheet 3

Answer the following questions.

1)  $8pq - 4p - 9 + 11p - 17$

a) Write down a pair of like terms for the given polynomial.

**-4p and 11p**

b) Evaluate the polynomial at  $p = 3$  and  $q = 4$ .

**91**

c) What is the coefficient of  $p$  in the given polynomial?

**8**

d) What is the leading coefficient of the given polynomial?

**8**

e) Identify the degree of the given polynomial.

**2**

2)  $6tu - v^4 + 2u^3 - 7v^4 + 11$

a) Identify the degree of the given polynomial.

**6**

b) List down the like terms in the given polynomial.

**and  $6tu$ ,  $-v^4$  and  $-7v^4$**

c) Evaluate the polynomial at  $t = 0$ ,  $u = 2$  and  $v = -1$ .

**-1**

d) What is the coefficient of  $u^3$  in the given polynomial?

**2**

e) What is the leading coefficient of the given polynomial?

**4**

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## Analyzing Polynomials

Sheet 4

Answer the following questions.

1)  $u^2 - 8uvw + 10v^4 + uvw - 19 + v + 2u^2 - 3$

a) Evaluate the polynomial at  $u = 0$ ,  $v = -2$  and  $w = 5$ .

\_\_\_\_\_

b) Identify the degree of the given polynomial.

\_\_\_\_\_

c) What is the lead

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\_\_\_\_\_

d) What is the coe

\_\_\_\_\_

e) List down the p

\_\_\_\_\_

2)  $8 - a^3 - 3a + a^2 + 5a$

a) What is the lead

\_\_\_\_\_

b) What is the coe

\_\_\_\_\_

c) Write down a pair of like terms for the given polynomial.

\_\_\_\_\_

d) Identify the degree of the given polynomial.

\_\_\_\_\_

e) Evaluate the polynomial at  $a = -4$ .

\_\_\_\_\_

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## Answer key

# Analyzing Polynomials

Sheet 4

Answer the following questions.

1)  $u^2 - 8uvw + 10v^4 + uvw - 19 + v + 2u^2 - 3$

a) Evaluate the polynomial at  $u = 0, v = -2$  and  $w = 5$ .

**136**

b) Identify the degree of the given polynomial.

**4**

c) What is the lead

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**10**

d) What is the coe

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**1**

e) List down the p

**$vw$  and  $uvw, u^2$  and  $2u^2$**

2)  $8 - a^3 - 3a + a^2 + 5a$

a) What is the lead

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**-1**

b) What is the coe

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**1**

c) Write down a pair of like terms for the given polynomial.

**$-3a$  and  $5a$**

d) Identify the degree of the given polynomial.

**3**

e) Evaluate the polynomial at  $a = -4$ .

**80**

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## Analyzing Polynomials

Sheet 5

Answer the following questions.

1)  $6rs^3 - 12 + 9s^5 - 2rs^3 - 3s^3 + 2r^2 - 8s^3$

a) What is the leading coefficient of the given polynomial? \_\_\_\_\_

b) What is the coefficient of  $r^2$  in the given polynomial? \_\_\_\_\_

c) List down the p \_\_\_\_\_

d) Evaluate the po \_\_\_\_\_

e) Identify the de \_\_\_\_\_

2)  $8c^2d^2 + bc^4d - 5c^2d^2 -$

a) Write down a p \_\_\_\_\_

b) Identify the de \_\_\_\_\_

c) Evaluate the polynomial at  $b = 2$ ,  $c = 1$  and  $d = -1$ . \_\_\_\_\_

d) What is the coefficient of  $bcd^3$  in the given polynomial? \_\_\_\_\_

e) What is the leading coefficient of the given polynomial? \_\_\_\_\_

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## Answer key

# Analyzing Polynomials

Sheet 5

Answer the following questions.

1)  $6rs^3 - 12 + 9s^5 - 2rs^3 - 3s^3 + 2r^2 - 8s^3$

a) What is the leading coefficient of the given polynomial? 9

b) What is the coefficient of  $r^2$  in the given polynomial? 2

c) List down the p and  $-2rs^3$ ,  $-3s^3$  and  $-8s^3$

d) Evaluate the po 34

e) Identify the de 5

2)  $8c^2d^2 + bc^4d - 5c^2d^2 -$

a) Write down a p  $8c^2d^2$  and  $-5c^2d^2$

b) Identify the de 6

c) Evaluate the polynomial at  $b = 2$ ,  $c = 1$  and  $d = -1$ . 21

d) What is the coefficient of  $bcd^3$  in the given polynomial? -2

e) What is the leading coefficient of the given polynomial? 1

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