NEW BRUNSWICK NUMBER, RELATIONS AND FUNCTIONS 10 · UNIT C · 25 QUESTIONS

Polynomials and Factoring: Polynomial Expressions and Trinomial Factoring, 25-question test — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **For the polynomial 2 x squared plus 3 x plus 4 the value when x equals 2 is**

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Question 1

Factoring $x^2 + 7x + 12$ gives

A) x plus 3 times x plus 4

B) x plus 2 times x plus 6

C) x plus 1 times x plus 12

D) x minus 3 times x minus 4

ANSWER

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2 **For the polynomial 3 x squared plus 2 x plus 1 the value when x equals 2 is**

2 For the polynomial 3 x squared plus 2 x plus 1 the value when x equals 2 is

Question 2

For the polynomial $2x^2 + 3x + 4$ the value when $x = 2$ is

ANSWER

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3 **For the polynomial 1 x squared plus 5 x plus 2 the value when x equals 2 is**

3 For the polynomial 1 x squared plus 5 x plus 2 the value when x equals 2 is

Question 3

The degree of the polynomial $3x^3 + 2x + 1$ is

ANSWER

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4

For the polynomial 4 x squared plus 1 x plus 3 the value when x equals 2 is

4 For the polynomial 4 x squared plus 1 x plus 3 the value when x equals 2 is

Question 4

A common factor of $6x^2$ and $9x$ is

A) 3 x

B) 6 x

C) 9 x

D) 18 x

ANSWER

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5 **For the polynomial 2 x squared plus 2 x plus 5 the value when x equals 2 is**

5 **For the polynomial 2 x squared plus 2 x plus 5 the value when x equals 2 is**

Question 5

Expanding $x + 2x + 3$ gives $x^2 + 5x$ plus

A) 5

B) 2

C) 6

D) 3

ANSWER

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6 **The degree of the polynomial 3 x cubed plus 2 x plus 1 is**

6 **The degree of the polynomial 3 x cubed plus 2 x plus 1 is**

Question 6

Factoring $x^2 - 9$ gives

A) x minus 9 times x plus 1

B) x plus 9 times x minus 1

C) x minus 3 times x plus 3

D) x plus 3 times x plus 3

ANSWER

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7 The degree of the polynomial 5 x squared plus x is

7 The degree of the polynomial 5 x squared plus x is

Question 7

Squares with a minus sign between them factor as a sum times a

A) sum

B) product

C) difference

D) quotient

ANSWER

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8 The sum of 3 x squared plus 2 x and x squared plus 4 x has x squared coefficient

8 The sum of 3 x squared plus 2 x and x squared plus 4 x has x squared coefficient

Question 8

A polynomial is in simplest form when like terms are

A) deleted

B) squared

C) factored only

D) combined

ANSWER

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9 The difference of 5 x squared and 2 x squared has x squared coefficient

9 The difference of 5 x squared and 2 x squared has x squared coefficient

Question 9

A trinomial of the form $x^2 + b\,x + c$ factors using two numbers that

A) multiply to b and add to c

B) are both equal to b

C) are both equal to c

D) multiply to c and add to b

ANSWER

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10 Expanding 3 times the quantity x plus 4 gives an x coefficient of

10 Expanding 3 times the quantity x plus 4 gives an x coefficient of

Question 10

Expanding 2 times the quantity x minus 5 gives a constant term of

ANSWER

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11 Expanding 2 times the quantity x minus 5 gives a constant term of

11 Expanding 2 times the quantity x minus 5 gives a constant term of

Question 11

Expanding 4 times the quantity x plus 3 gives a constant term of

ANSWER

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12 The product of x plus 3 and x plus 2 has constant term

12 The product of x plus 3 and x plus 2 has constant term

Question 12

Expanding 3 times the quantity x plus 4 gives an x coefficient of

ANSWER

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13 The product of x plus 5 and x plus 4 has x coefficient

13 The product of x plus 5 and x plus 4 has x coefficient

Question 13

Expanding $x - 5x + 5$ gives x^2 minus

A) 25

B) 5

C) 10

D) 0

ANSWER

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14 The product of x minus 3 and x plus 3 has constant term

14 The product of x minus 3 and x plus 3 has constant term

Question 14

The difference of 5 x^2 and 2 x^2 has x^2 coefficient

ANSWER

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15 Factoring x squared plus 7 x plus 12 gives

15 Factoring x squared plus 7 x plus 12 gives

Question 15

The first step in factoring a polynomial is to look for a

A) square root

B) prime number

C) fraction

D) common factor

A x + 3 × x + 4

B x + 2 × x + 6

C x + 1 × x + 12

D x - 3 × x - 4

A x + 3 × x + 4

B x + 2 × x + 6

C x + 1 × x + 12

D x - 3 × x - 4

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16 Factoring x squared plus 8 x plus 15 gives

16 Factoring x squared plus 8 x plus 15 gives

Question 16

The greatest common factor of 12 x and 18 is

A) 12

B) 6

C) 18

D) 3

A x + 2 × x + 7

B x + 3 × x + 5

C x + 1 × x + 15

D x - 3 × x - 5

A x + 2 × x + 7

B x + 3 × x + 5

C x + 1 × x + 15

D x - 3 × x - 5

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17 Factoring x squared minus 9 gives

17 Factoring x squared minus 9 gives

Question 17

Factoring $x^2 + 8x + 15$ gives

A) x plus 2 times x plus 7

B) x plus 3 times x plus 5

C) x plus 1 times x plus 15

D) x minus 3 times x minus 5

A x - 9 × x + 1
B x + 9 × x - 1
C x - 3 × x + 3
D x + 3 × x + 3

A x - 9 × x + 1

B x + 9 × x - 1

C x - 3 × x + 3

D x + 3 × x + 3

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18 **A trinomial of the form x squared plus b x plus c factors using two numbers that**

18 **A trinomial of the form x squared plus b x plus c factors using two numbers that**

Question 18

For the polynomial $3x^2 + 2x + 1$ the value when $x = 2$ is

A multiply to b and add to c

B are both equal to b

C are both equal to c

D multiply to c and add to b

A multiply to b and add to c

B are both equal to b

C are both equal to c

D multiply to c and add to b

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19 **A common factor of 6 x squared and 9 x is**

19 A common factor of 6 x squared and 9 x is

Question 19

The degree of the polynomial $5x^2 + x$ is

A 3 x

B 6 x

C 9 x

D 18 x

A 3 x

B 6 x

C 9 x

D 18 x

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20 The greatest common factor of 12 x and 18 is

20 The greatest common factor of 12 x and 18 is

Question 20

A common factor of $8x^2$ and $12x$ is

A) 8 x

B) 12 x

C) 24 x

D) 4 x

A 12

B 6

C 18

D 3

A 12

B 6

C 18

D 3

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21 Expanding x plus 2 times x plus 3 gives x squared plus 5 x plus

21 Expanding x plus 2 times x plus 3 gives x squared plus 5 x plus

Question 21

Expanding $x + 4x + 5$ gives $x^2 + 9x$ plus

A) 20

B) 9

C) 4

D) 5

A 5

B 2

C 6

D 3

A 5

B 2

C 6

D 3

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22 A polynomial is in simplest form when like terms are

22 A polynomial is in simplest form when like terms are

Question 22

Factoring $x^2 - 16$ gives

A) x minus 8 times x plus 2

B) x plus 4 times x plus 4

C) x minus 4 times x plus 4

D) x minus 16 times x plus 1

A deleted

B squared

C factored only

D combined

A deleted

B squared

C factored only

D combined

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23 The term monomial means a polynomial with

23 The term monomial means a polynomial with

Question 23

Factoring $x^2 + 9x + 20$ gives

A) x plus 4 times x plus 5

B) x plus 2 times x plus 10

C) x plus 1 times x plus 20

D) x minus 4 times x minus 5

- A one term
- B two terms
- C three terms
- D no terms

- A one term
- B two terms
- C three terms
- D no terms

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24 The term binomial means a polynomial with

24 The term binomial means a polynomial with

Question 24

For the polynomial $1x^2 + 5x + 2$ the value when $x = 2$ is

A one term
B two terms
C three terms
D four terms

A one term

B two terms

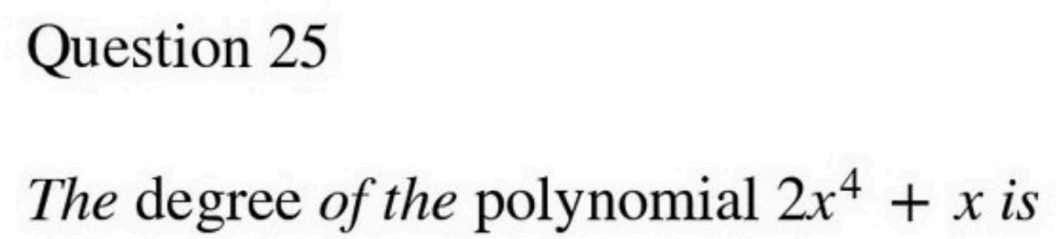
C three terms

D four terms

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25 **A difference of squares factors as a sum times a**

25 A difference of squares factors as a sum times a



A sum
B product
C difference
D quotient

A sum

B product

C difference

D quotient

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ANSWER KEY

1.	18	**10.**	3	**19.**	A
2.	17	**11.**	-10	**20.**	B
3.	16	**12.**	6	**21.**	C
4.	21	**13.**	9	**22.**	D
5.	17	**14.**	-9	**23.**	A
6.	3	**15.**	A	**24.**	B
7.	2	**16.**	B	**25.**	C
8.	4	**17.**	C		
9.	3	**18.**	D		

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