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CLEP College Algebra Preparation 2020 - 2021

CLEP College Algebra Preparation

2020 - 2021

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CLEP College Algebra Workbook

+ 2 Full-Length CLEP College Algebra Practice Tests

Reza Nazari

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By

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Description

CLEP College Algebra Preparation 2020 - 2021, which reflects the 2020 - 2021 test guidelines, is prepared by top CLEP College Algebra instructors and test prep experts to help test takers succeed on the CLEP College Algebra Test. This CLEP College Algebra prep new edition has been updated to replicate questions appearing on the most recent CLEP College Algebra tests. Upon completion of this comprehensive CLEP College Algebra prep book, you will have a solid foundation and sufficient practice to ace the CLEP College Algebra test. **This prep book is your ticket to scoring higher on CLEP College Algebra.**

Not only does this perfect and comprehensive CLEP College Algebra book include everything you will ever need to conquer the CLEP College Algebra test, but it also contains two full-length and realistic CLEP college Algebra practice tests that reflect the format and question types on the CLEP College Algebra to help you check your exam-readiness and identify where you need more practice.

CLEP College Algebra Preparation 2020 - 2021 contains many exciting and unique features to help you improve your test scores, including:

- ✓ Content 100% aligned with the 2020 CLEP College Algebra test
- ✓ Complete coverage of all CLEP College Algebra concepts which you will be tested
- ✓ Numerous Math practice questions in both multiple-choice and grid-in formats with answers grouped by topic, so you can focus on your weak areas
- ✓ Abundant Math skill-building exercises to help test-takers approach different question types that might be unfamiliar to them
- ✓ 2 full-length practice tests (featuring new question types) with detailed answers

Name: ……..

Date: ……

Topic	***Multiplying and Dividing Monomials***	
Notes	✓ When you divide or multiply two monomials you need to divide or multiply their coefficients and then divide or multiply their variables. ✓ In case of exponents with the same base, you need to subtract their powers. ✓ Exponent's rules: $x^a \times x^b = x^{a+b}$, $\frac{x^a}{x^b} = x^{a-b}$ $\frac{1}{x^b} = x^{-b}$, $(x^a)^b = x^{a\times b}$ $(xy)^a = x^a \times y^a$	
Example	*Divide expressions.* $\frac{-18x^5y^6}{2xy^2} =$ **Solution:** Use exponents' division rule: $\frac{x^a}{x^b} = x^{a-b}$, $\frac{x^5}{x} = x^{5-1} = x^4$ and $\frac{y^6}{y^2} = y^4$ Then: $\frac{-18x^5y^6}{2xy^2} = -9x^4y^4$	
Your Turn!	1) $(x^8y)(xy^2) =$ _____	2) $(x^4y^3)(x^2y^3) =$ _____
	3) $(x^7y^4)(2x^5y^2) =$ _____	4) $(3x^5y^4)(4x^6y^3) =$ _____
	5) $(-6x^8y^7)(4x^6y^9) =$ _____	6) $(-2x^9y^3)(9x^7y^8) =$ _____
	7) $\frac{30x^8y^9}{6x^5y^4} =$ _____	8) $\frac{-42x^{12}y^{16}}{7x^8y^9} =$ _____

Name: ……..

Date: ……

Topic	***Multiplying a Polynomial and a Monomial***	
Notes	✓ When multiplying monomials, use the product rule for exponents. $x^a \times x^b = x^{a+b}$ ✓ When multiplying a monomial by a polynomial, use the distributive property. $a \times (b + c) = a \times b + a \times c = ab + ac$ $a \times (b - c) = a \times b - a \times c = ab - ac$	
Example	*Multiply expressions.* $4x(5x - 8) =$ **Solution:** Use Distributive Property: $4x(5x - 8) = 4x \times 5x - 4x \times (8) =$ Now, simplify: $4x \times 5x - 4x \times (8) = 20x^2 - 32x$	
Your Turn!	1) $3x(2x + y) =$_____	2) $x(x - 3y) =$_____
	3) $-x(5x - 3y) =$ ____ _____	4) $4x(x + 5y) =$ ____ _____
	5) $-x(5x + 8y) =$ ____ _____	6) $2x(6x - 7y) =$ ____ _____
	7) $-3x(x^3 + 4y^2 - 6x) =$ _____	8) $7x(x^2 - 5y^2 + 4) =$ _____

Name: ……..

Date: ……

Topic	***Multiplying Binomials***	
Notes	✓A binomial is a polynomial that is the sum or the difference of two terms, each of which is a monomial. ✓To multiply two binomials, use "FOIL" method. (First–Out–In–Last) $(x+a)(x+b) = x \times x + x \times b + a \times x + a \times b = x^2 + bx + ax + ab$	
Example	*Multiply.* $(x-4)(x+9) =$ **Solution:** Use "FOIL". (First–Out–In–Last): $(x-4)(x+9) = x^2 + 9x - 4x - 36$ Then simplify: $x^2 + 9x - 4x - 36 \ = x^2 + 5x - 36$	
Your Turn!	1) $(x+2)(x+2) =$ _____	2) $(x+3)(x+2) =$ _____
	3) $(x-3)(x+4) =$ _____	4) $(x-2)(x-4) =$ _____
	5) $(x+3)(x+4) =$ _____	6) $(x+5)(x+4) =$ _____
	7) $(x-6)(x-5) =$ _____	8) $(x-5)(x-5) =$ _____
	9) $(x+6)(x-8) =$ _____	10) $(x-9)(x+7) =$ _____

Name: ……. **Date:** ……

Topic	***Factoring Trinomials***	
Notes	To factor trinomial, use of the following methods: ✓ "FOIL": $(x+a)(x+b)=x^2+(b+a)x+ab$ ✓ "Difference of Squares": $a^2-b^2=(a+b)(a-b)$ $a^2+2ab+b^2=(a+b)(a+b)$ $a^2-2ab+b^2=(a-b)(a-b)$ ✓ "Reverse FOIL": $x^2+(b+a)x+ab=(x+a)(x+b)$	
Example	*Factor this trinomial.* $x^2+12x+32=$ **Solution:** Break the expression into groups: $(x^2+4x)+(8x+32)$ Now factor out x from x^2+4x : $x(x+4)$, and factor out 8 from $8x+32$: $8(x+4)$ Then: $(x^2+4x)+(8x+32)=x(x+4)+8(x+4)$ Now factor out like term: $(x+4)\rightarrow(x+4)(x+8)$	
Your Turn!	1) $x^2+6x+9=$ _____	2) $x^2+5x+6=$ ____
	3) $x^2+x+12=$ ____	4) $x^2-6x+8=$ _____
	5) $x^2+7x+12=$ _____	6) $x^2+12x+32=$ _____
	7) $x^2-11x+30=$ _____	8) $x^2-14x+45=$ _____

Answers– Chapter 6

Simplifying Polynomials

1) $-2x + 4$
2) $4x + 12$
3) $9x^2 - 12x$
4) $10x^2 + 40x$
5) $-10x^2 - 7x$
6) $-33x^2 + 12x$
7) $x^2 + 9x + 20$
8) $x^2 + 10x + 16$
9) $10x^3 + x^2$
10) $2x^5 + 10x^4$

Adding and Subtracting Polynomials

1) $5x^2 - x - 5$
2) $x^3 + x - 2$
3) $7x^2 - 5x - 5$
4) $5x^2 - 9$
5) $7x^2$
6) $x^2 + 10$
7) $4x^3 - 3x$
8) $7x^4 - 2x$
9) $11x^3 + 1$
10) $-x^3 + 2x^2 - 7$

Multiplying Monomials

1) $8x^8$
2) $30x^{11}$
3) $-12x^5y^6$
4) $-15x^8y^5$
5) $40x^{13}y^8$
6) $18x^{16}y^{13}$
7) $36x^{12}y^{11}z^5$
8) $-56x^{15}y^{14}z^{16}$

Multiplying and Dividing Monomials

1) x^9y^3
2) x^6y^6
3) $2x^{12}y^6$
4) $12x^{11}y^7$
5) $-24x^{14}y^{16}$
6) $-18x^{16}y^{11}$
7) $5x^3y^5$
8) $-6x^4y^7$

Multiplying a Polynomial and a Monomial

1) $6x^2 + 3xy$
2) $x^2 - 3xy$
3) $-5x^2 + 3xy$
4) $4x^2 + 20xy$
5) $-5x^2 - 8xy$
6) $12x^2 - 14xy$
7) $-3x^4 - 12xy^2 + 18x^2$
8) $7x^3 - 35xy^2 + 28x$

Multiplying Binomials

1) $x^2 + 4x + 4$
2) $x^2 + 5x + 6$
3) $x^2 + x - 12$
4) $x^2 - 6x + 8$
5) $x^2 + 7x + 12$
6) $x^2 + 9x + 20$
7) $x^2 - 11x + 30$
8) $x^2 - 10x + 25$
9) $x^2 - 2x - 48$
10) $x^2 - 2x - 63$

Factoring Trinomials

1) $(x + 3)(x + 3)$
2) $(x + 3)(x + 2)$
3) $(x - 3)(x + 4)$
4) $(x - 2)(x - 4)$
5) $(x + 3)(x + 4)$
6) $(x + 8)(x + 4)$
7) $(x - 6)(x - 5)$
8) $(x - 9)(x - 5)$