



IB Incoming Algebra 2 Students

Math Summer Review

This tool is designed to help you identify any areas from Algebra I for which you may need support to ensure your success in during your years in IB.

To successfully complete the assignment, work each problem on the worksheets provided, show all work and indicate your answer by underlining it or boxing it. There are optional Kahn Academy assignments and IXL assignments if you would like the additional support. When you return to school you will turn in the packet and you may have an assessment during the first quarter of the school year similar to this assignment, so we encourage you to complete it with fidelity to ensure you are prepared.

This assignment should be completed WITHOUT the use of a calculator.



An answer key has been provided, so you may check your work.

Options for additional support:

- Every problem has a corresponding Khan Academy assignment which may be found in our Khan Academy class (join code: D64XEYZ6). These assignments link to video lessons and extra practice. To keep the assignments organized by section, they have been assigned “due dates”, but you may ignore those dates. Khan is optional.
- For those students with an IXL account from their previous school, the supporting IXL modules have been listed. These are optional.
- Mrs. Weaver will be holding 5 OPTIONAL help sessions over the summer. She will have review centers of all topics that you may choose to attend/complete and cycle through. You may attend as many as you feel necessary, but please email her at weaversu@pcsb.org within 1 week of the dates you are planning to attend, so she may ensure to have enough materials on hand.

Summer Pre-session Dates – 9am – 11am at Palm Harbor University High School

Tuesday, 6/11/2024

Thursday, 6/20/2023

Wednesday, 6/26/2024

Monday, 7/8/2023

Thursday, 7/18/2024



Summer 2024 Remind with

Mrs. Weaver

Sent a Text to 81010

Text this message:

@phusun24

It is our hope that you do not find anything in this task unfamiliar or particularly challenging, but if you do, please do not hesitate to take advantage of the extra support opportunities over the summer described above.

Summer Assignment: PART ONE: EXPRESSIONS

Simplify the following expressions without the use of a calculator. SHOW ALL WORK AND STEPS CLEARLY, EXPRESSING ANY REMAINDERS AS SIMPLIFIED FRACTIONS.

1. $24 - (16 \div 4) + 5(2)^3$

2. $-4^2 - 5^2$

3.
$$\frac{7(-2) - 6 + 9}{-44 \div 4}$$

4. $(-16) \div (-4) \cdot |8 - 15|$

5.
$$\frac{(3^2)(y^3)}{(3^{-2})(y^6)}$$

6.
$$\left(\frac{3}{4}x^2 - \frac{2}{3}\right) + \left(-\frac{1}{2}x^2 + x + \frac{5}{6}\right)$$

7. $3762 \div 26 =$

8. $3762(26) =$

PART TWO: SOLVING EQUATIONS

Solve the following equations/systems of equations without the use of a calculator. **SHOW ALL WORK AND STEPS CLEARLY.**

1. $2 - 3(3n - 2) = -10$

2. $-\frac{5}{4}x = \frac{5}{20}$

3. $\frac{27}{18} = \frac{9}{x}$

4. $x^2 - 4x = 5$

5. $y = 2x + 1$
 $y = -3x - 2$

6. $4x - 3y = 12$
 $2x + 3y = -6$

PART THREE: QUADRATIC EXPRESSIONS

1. Completely factor $2x + 4x^2$

2. Completely factor $x^2 - 25$

3. Completely factor $x^2 - 4x - 32$

4. Completely factor $3x^2 + 11x - 4$

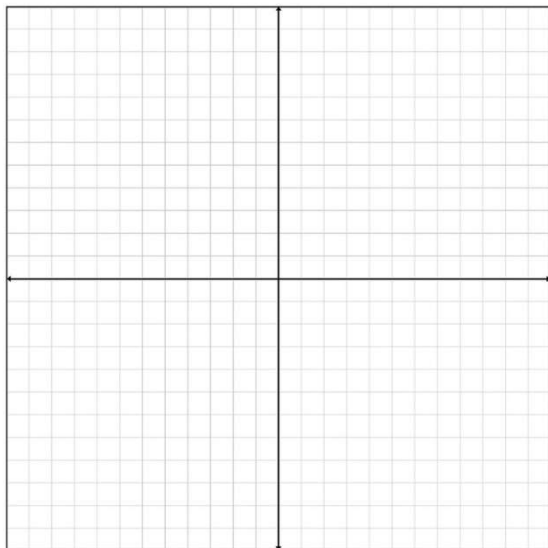
5. Completely expand $(2 + x)^2$

6. Completely expand $(2x + 7)(x - 3)$

PART FOUR: EQUATIONS OF LINES

1. Determine the equation of the line in slope-intercept form ($y = mx + b$) contains the points $(-1, 2)$ and $(5, 6)$

2. Graph the following equation $5x + 7y = 35$.



3. Use the graph on the left to identify the:

Slope: _____

x -intercept: _____

y -intercept: _____

4. Identify the slope of a line that is perpendicular to the line in Section 4 Problem 1.

5. Find the equation of a line that is parallel to the line in Section 4 Problem 2 passing through the point (-5,1).

PART FIVE: RADICAL EXPRESSIONS AND OPERATIONS OF RADICALS

Simplify the following radical expressions.

1. $\sqrt{75}$

2. $3\sqrt{2} + \sqrt{32}$

3. $2\sqrt{3} \cdot 3\sqrt{2} \cdot 4\sqrt{15}$

Answers

Part 1

Khan Academy Assignment
(Part 1 assignments listed with a “due date” of 8/5)

IXL Module

1.	60	Exponents with integer bases (7)	8 th grade C.8
		Order of operations with fractions and exponents (7)	
2.	-41	Exponents with integer bases (7)	Alg 1 B.2
		Order of operations with fractions and exponents (7)	
3.	1	Order of operations with negative numbers (7)	8 th grade H.5,H.9
4.	28	Order of operations with negative numbers (7)	7 th grade R.6
		Finding absolute values (6)	
5.	$\frac{81}{y^3}$	Multiply and divide powers (integer exponents) (8)	Alg 1 W.1,W.6,Z.4
6.	$\frac{1}{4}x^2 + x + \frac{1}{6}$	Adding & subtracting polynomials (A1)	8 th grade H.2
		Adding & subtracting negative fractions (7)	Alg 1 AA.4
7.	$144\frac{9}{13}$	Multi-digit division (5)	4 th grade E.26; 5 th grade D.16
8.	97 812	Multi-digit multiplication (5)	4 th grade D.16

Part 2

(Part 2 assignments listed with a “due date” of 8/6)

1.	$n = 2$	Equations with parentheses (8)	8 th grade Y.15; Alg 1 J.5
2.	$x = -\frac{1}{5}$	Two-step equations with decimals and fractions (7)	8 th grade Y.16
3.	$x = 6$	Solving proportions (7)	Alg 1 C.5
4.	$x = 5; x = -1$	Solve quadratic equations: factoring (A1)	Alg 1 CC.8
5.	$x = -\frac{3}{5}; y = -\frac{1}{5}$	Systems of equations with substitution (A1)	Alg 1 V.8
6.	$x = 1; y = -\frac{8}{3}$	Systems of equations with elimination challenge (A1)	Alg 1 V.10

Part 3

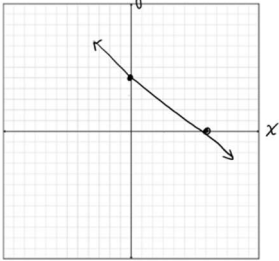
(Part 3 assignments listed with a "due date" of 8/7)

1.	$2x(1 + 2x)$	Factoring quadratics with a common factor (A1)	Alg 1 BB.2
2.	$(x + 5)(x - 5)$	Difference of squares (A1)	Alg 1 BB.6
3.	$(x - 8)(x + 4)$	Factoring quadratics intro (A1)	Alg 1 BB.4
4.	$(3x - 1)(x + 4)$	Factoring quadratics by grouping (A1)	Alg 1 BB.5
5.	$4 + 4x + x^2$	Multiply perfect squares of binomials (A1)	Alg 1 AA.9
6.	$2x^2 + x - 21$	Multiplying binomials (A1)	Alg 1 AA.8

Answers**Khan Academy Assignment****IXL Module**

Part 4

(Part 4 assignments listed with a "due date" of 8/8)

1.	$y = \frac{2}{3}x + \frac{8}{3}$	Slope-intercept from two points (A1)	Alg 1 T.9
2.		Graph from linear standard form (A1)	Alg 1 T.20
3.	slope: $-\frac{5}{7}$ x-intercept: 7 y-intercept: 5	Slope from equation (A1) Compare linear functions (A1)	Alg 1 T.3 Alg 1 T.19
4.	$-\frac{3}{2}$	Parallel & perpendicular lines from equations (A1)	Alg 1 T.27
5.	$y = -\frac{5}{7}x - \frac{18}{7}$	Write equations of parallel & perpendicular lines (A1)	Alg 1 T.28

Part 5

(Part 5 assignments listed with a "due date" of 8/9)

1.	$5\sqrt{3}$	Simplify square root expressions (A1)	Alg 1 FF.1
2.	$7\sqrt{2}$	Adding and subtracting irrational numbers (A1)	Alg 1 FF.5
3.	$72\sqrt{10}$	Multiplying and dividing irrational numbers (A1)	Alg 1 FF.4

How to join the Kahn Academy Course

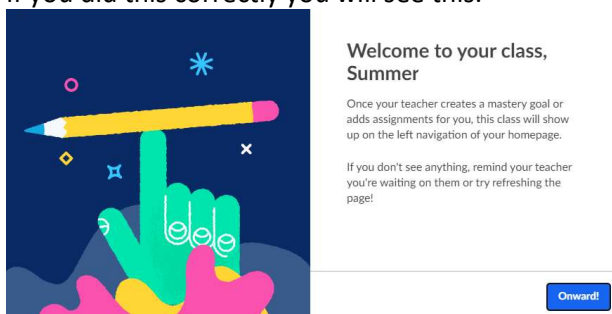
Go to: www.khanacademy.com

Sign in using your usual username and password. If you do not have one yet create an account.

Once on the main page click teachers then enter the class code: D64XEYZ6

Join the class Summer 2024

If you did this correctly you will see this:



Look to the left and click on assignments tab.

How to Join ManageBAC

Fill out the Microsoft Form using the QR code

