Date: _____   **Instructors:** Peter Curley, Channing Hodgkins, Jared Lyons

Student Name/ID#: _____

	Total Score:
	/ 100

Students Entering ALGEBRA I (All levels) - Summer Assignment

INSTRUCTIONS: This assignment is to help prepare you for Algebra I by helping you recall key, foundation topcs. Answer all questions. SHOW ALL SUPPORTING WORK as required by the problem. Do your own work.

Each problem has a topic resource name which you can use to look up the topic covered.

QUESTION 1   /1

Topic Resource: Place Value

Select the place value of the <u>underlined</u> digit: 1.<u>2</u>30

A ☐ tenths   **B** ☐ hundredths

C ☐ thousandths   **D** ☐ unit

E ☐ tens

QUESTION 2   /1

Topic Resource: Place Value

Select the place value of the <u>underlined</u> digit: 12.49<u>0</u>8

A ☐ ten-thousandths   **B** ☐ thousandths

C ☐ unit   **D** ☐ tens

E ☐ hundredths   **F** ☐ tenths

QUESTION 3   /1

Topic Resource: Place Value

Round the number to the underlined place value position: 54.381

A ☐ 54.4   **B** ☐ 54

C ☐ 50   **D** ☐ 54.3

QUESTION 4   ☐ /1

Topic Resource: Rounding Decimals

Round the number to the nearest hundredth: 45.7215

A ☐ 45.73   **B** ☐ 45.722

C ☐ 45.721   **D** ☐ 45.72

QUESTION 5   ☐ /1

Topic Resource: Rounding Decimals

Round the number to the underlined place value position: 321.987

A ☐ 321.9   **B** ☐ 321.99

C ☐ 321.0   **D** ☐ 322.0

QUESTION 6   ☐ /1

Topic Resource: Ordering Decimals

Drag the numbers to place them in order from least to greatest.

≡   114.2   ≡   114.02   ≡   114.202   ≡   114.002

QUESTION 7   ☐ /1

Topic Resource: Fractions in Lowest Terms

Which of the following is the fraction, $\frac{12}{18}$ in lowest terms?

A ☐ $\frac{4}{9}$ B ☐ $\frac{1}{4}$

C ☐ $\frac{2}{3}$ D ☐ $\frac{4}{3}$

QUESTION 8   ☐ /1

Topic Resource: Fractions, Improper and Mixed

Which of the following is $3\frac{4}{5}$ written as an improper fraction?

A ☐ $\frac{12}{5}$ B ☐ $\frac{19}{5}$

C ☐ $\frac{32}{5}$

QUESTION 9   ☐ /1

Topic Resource: Fractions, Improper and Mixed

Which of the following is $\frac{31}{8}$ written as a mixed number?

A ☐ $4\frac{7}{8}$ B ☐ $3\frac{1}{8}$

C ☐ $3\frac{7}{8}$ D ☐ $4\frac{1}{8}$

QUESTION 10   ☐ /1

Topic Resource: Comparing and Ordering Fractions

Drag the numbers to place them in order from least to greatest.

≡ $\frac{2}{3}$ ≡ $\frac{4}{9}$ ≡ $\frac{5}{6}$ ≡ $\frac{7}{12}$

QUESTION 11   ☐ /2

Topic Resource: Adding Fractions

Betty and Will each simplified the expression, $\frac{5}{12} + \frac{7}{8}$. Unfortunately, they did not get the same result.

Betty was convinced the answer was $\frac{31}{24}$.

Will was certain the answer was $\frac{12}{20}$ or $\frac{3}{5}$ reduced to lowest terms.

Simplify the expression $\frac{5}{12} + \frac{7}{8}$ on your own and determine who is correct.

Part 1: Type the **name of the person** with the correct answer.

Part 2: **Explain your answer.** How do you now that person had the correct answer? Be specific.

QUESTION 12   /2

Topic Resource: Multiplying Fractions

Gabby and Aidan each simplified the expression, $\left(2\frac{2}{5}\right) \cdot \left(1\frac{3}{7}\right)$. Unfortunately, they did not get the same result.

Gabby was convinced the answer was $2\frac{6}{35}$

Aidan was certain the simplified answer was $3\frac{3}{7}$

Simplify the expression $\left(2\frac{2}{5}\right) \cdot \left(1\frac{3}{7}\right)$ on your own and determine who is correct.

Part 1: Type the **name of the person** with the correct answer.

Part 2: **Explain your answer.** How do you now that person had the correct answer? Be specific.

QUESTION 13   /2

Topic Resource: Dividing Fractions

Ava and Jack each simplified the expression, $3\frac{1}{4} \div 2\frac{1}{3}$. Unfortunately, they did not get the same result.

Ava was convinced the answer was $1\frac{11}{28}$

Jack was certain the simplified answer was $1\frac{3}{4}$

Simplify the expression $3\frac{1}{4} \div 2\frac{1}{3}$ on your own and determine who is correct.

Part 1: **Type the name of the person with the correct answer.**

Part 2: **Explain your answer. How do you now that person had the correct answer? Be specific.**

QUESTION 14   /2

Topic Resource: Adding Decimals

When Gertrude added 75.12 + 21.5 her answer of 77.27 was marked wrong.

Part 1: **What is the correct answer?**

Part 2: **Explain what Gertrude did wrong.**

QUESTION 15   /2

Topic Resource: Multiplying Decimals

When Conor multiplied (6.12)(3.5) and his answer of 214.2 was marked wrong.

Part 1: **What is the correct answer?**

Part 2: **Explain what Connor did wrong.**

QUESTION 16

/2

Topic Resource: Dividing Decimals

When Damien divided $12.6 \div 0.003$ and his answer of 4.2 was marked wrong.

Part 1: **What is the correct answer?**

Part 2: **Explain what Connor did wrong.**

QUESTION 17

/1

Topic Resource: Writing Fractions as Decimals

Which of the following is the decimal equivalent of $\frac{5}{8}$?

A ☐ 0.58   **B** ☐ 0.625

C ☐ 1.6   **D** ☐ 0.64

QUESTION 18

/1

Topic Resource: Writing Decimals as Fractions

Which of the following is the decimal 0.45 written as a fraction in lowest terms?

A ☐ $\frac{4}{5}$

B ☐ $\frac{2}{5}$

C ☐ $\frac{9}{20}$

D ☐ $\frac{3}{20}$

QUESTION 19

☐ /2

Topic Resource: Order of Operations

Stephanie and Pete each simplified the expression, $30\left(6-4\right)$ Unfortunately, they did not get the same result.

Stephanie was convinced the answer was 176.

Pete was certain the answer was 60.

Simplify the expression $30\left(6-4\right)$ on your own and determine who is correct.

Part 1: **Type the name of the person with the correct answer.**

Part 2: **Explain your answer. How do you now that person had the correct answer? Be specific.**

QUESTION 20

☐ /2

Topic Resource: Order of Operations

Heather and Tom each simplified the expression, $81 \div 27 \times 6 - 2$ Unfortunately, they did not get the same result.

Heather was convinced the answer was 16.

Tom was certain the answer was 12.

Simplify the expression $81 \div 27 \times 6 - 2$ on your own and determine who is correct.

Part 1: **Type the name of the person with the correct answer.**

Part 2: **Explain your answer. How do you now that person had the correct answer? Be specific.**

QUESTION 21
/1

Topic Resource: Order of Operations

Simplify the expression: $\dfrac{5 + \sqrt{(-5)^2 - 4(1)(6)}}{2}$

A ☐ -2 **B** ☐ 3

C ☐ 6 **D** ☐ 5.5

QUESTION 22
/4

Topic Resource: Integer Arithmetic

Match each expression with the correct answer.

A	$5 - 8$
B	$-5 - 8$
C	$-5 + 8$
D	$5 - (-8)$

| 1 | -13 | 2 | 13 | 3 | -3 | 4 | 3 |

QUESTION 23 /4

Topic Resource: Integer Arithmetic

Match each expression with the correct answer.

A	$(6)(-3)$
B	$(-6)(-3)$
C	$-6 - (-3)$
D	$-18 \div -6$

| 1 | -3 | 2 | 3 | 3 | -18 | 4 | 18 |

QUESTION 24 /2

Topic Resource: Properties of Addition

The equation $7 + x = x + 7$, **illustrates the** [1 _____] .

The equation $(x + 4) + 6 = x + (4 + 6)$, **illustrates the** [2 _____] .

Choose one option for each blank section

1	Commutative Property of Addition		2	Commutative Property of Addition
1	Associative Property of Addition		2	Associative Property of Addition

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QUESTION 25   [ ] /2

Topic Resource: Solving Equations

Mary and Jason each solved the equation, $3x + 8 = 29$ **Unfortunately, they did not get the same result.**

Mary was convinced that x = 18 .

Jason was certain that x = 7.

Solve the equation $3x + 8 = 29$ **on your own and determine who is correct.**

Part 1: **Type the name of the person with the correct answer.**

Part 2: **Explain your answer. How do you now that person had the correct answer? Be specific.**

QUESTION 26   [ ] /2

Topic Resource: Solving Equations

Millie and Dan each solved the equation, $3x + 2x + 50 = 90$ **Unfortunately, they did not get the same result.**

Millie was convinced that x = 6.7 .

Dan was certain that x = 8.

Solve the equation $3x + 2x + 50 = 90$ **on your own and determine who is correct.**

Part 1: **Type the name of the person with the correct answer.**

Part 2: **Explain your answer. How do you now that person had the correct answer? Be specific.**

QUESTION 27

/2

Topic Resource: Solving Equations

I solved the following equation using the steps shown, but my answer did not check.

$$5x - 8 = 3x + 15$$

$$2x - 8 = 15$$

$$2x = 7$$
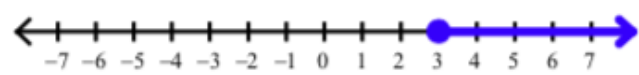
$$x = 3.5$$

Part 1: **Explain the mistake that I made.**

Part 2: **What is the correct answer?**

QUESTION 28

/1

Topic Resource: **Graph Inequalities on a Number Line**

Which of the following describes the graph on the number line?

A ☐ x > 3
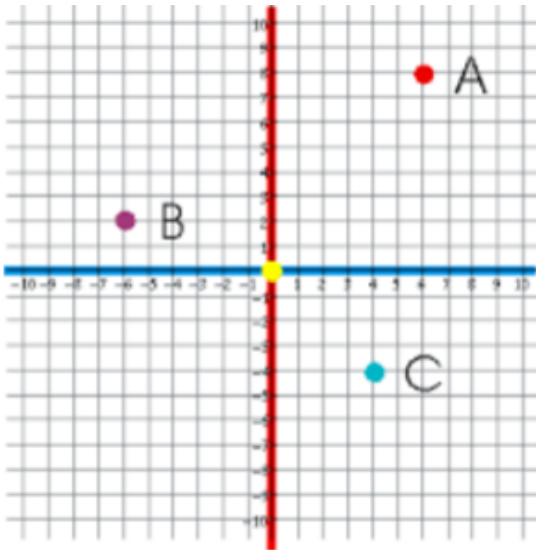
B ☐ x ≤ 3

C ☐ x ≥ 3

D ☐ x < 3

QUESTION 29

/1

Topic Resource: Graphing on the Coordinate Plane

Which of the following are the coordinates of Point B?

A ☐ $(6,\ 2)$

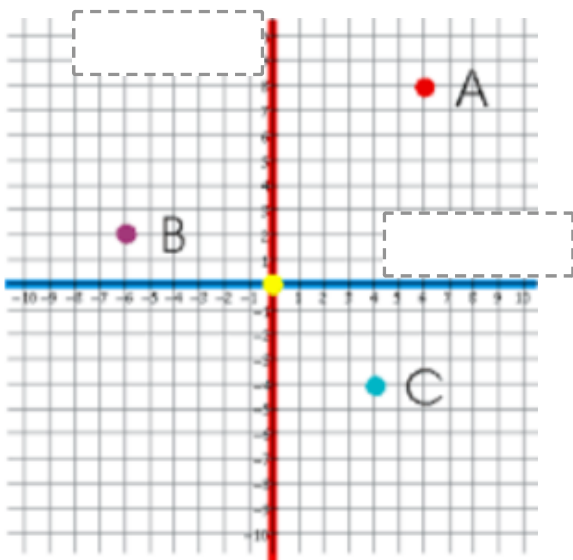**B** ☐ $(-6,\ -2)$

C ☐ $(2,\ -6)$

D ☐ $(-6,\ 2)$

QUESTION 30

/2

Topic Resource: Graphing on the Coordinate Plane

Drag the correct label to the correct location.

1	y-axis		2	x-axis

QUESTION 31

/1

Topic Resource: Percent

Which of the following is 16% of 380?

A ☐ 60.8

B ☐ 6080

C ☐ 608

D ☐ 6.08

QUESTION 32

/1

Topic Resource: Percent

A lamp is on sale for 25% off.

What is the sale price of the lamp, if the original price is $108?

A ☐ $ 133

B ☐ $ 27

C ☐ $ 83

D ☐ $ 81