

Date: \_\_\_\_\_

Instructors: Peter Curley, Channing Hodgkins, Jared Lyons

Student Name/ID#: \_\_\_\_\_

Total Score:

/ 100

ARCHBISHOP WILLIAMS HIGH SCHOOL - AWHS SUMMER MATH ASSIGNMENTS: SECTION 1

## 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 topics. 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 underlined digit: 1.230

- |                            |             |                            |            |
|----------------------------|-------------|----------------------------|------------|
| A <input type="checkbox"/> | tenths      | B <input type="checkbox"/> | hundredths |
| C <input type="checkbox"/> | thousandths | D <input type="checkbox"/> | unit       |
| E <input type="checkbox"/> | tens        |                            |            |

### QUESTION 2

 /1

**Topic Resource: Place Value**

Select the place value of the underlined digit: 12.4908

- |                            |                 |                            |             |
|----------------------------|-----------------|----------------------------|-------------|
| A <input type="checkbox"/> | ten-thousandths | B <input type="checkbox"/> | thousandths |
| C <input type="checkbox"/> | unit            | D <input type="checkbox"/> | tens        |
| E <input type="checkbox"/> | hundredths      | F <input type="checkbox"/> | tenths      |

### QUESTION 3

 /1

**Topic Resource: Place Value**Round the number to the underlined place value position: 54.381A  54.4B  54C  50D  54.3

QUESTION 4

 /1**Topic Resource: Rounding Decimals**

Round the number to the nearest hundredth: 45.7215

A  45.73B  45.722C  45.721D  45.72

QUESTION 5

 /1**Topic Resource: Rounding Decimals**Round the number to the underlined place value position: 321.987A  321.9B  321.99C  321.0D  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.

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

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  0.58B  0.625C  1.6D  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,  $30(6 - 4)$  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  $30(6 - 4)$  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:  $\frac{5 + \sqrt{(-5)^2 - 4(1)(6)}}{2}$

A  -2

B  3

C  6

D  5.5

QUESTION 22

 /4



**Topic Resource: Integer Arithmetic**

Match each expression with the correct answer.

<b>A</b>	$5 - 8$	—	
<b>B</b>	$-5 - 8$	—	
<b>C</b>	$-5 + 8$	—	
<b>D</b>	$5 - (-8)$	—	

1	-13	2	13	3	-3	4	3
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QUESTION 23

/4

**Topic Resource: Integer Arithmetic**

Match each expression with the correct answer.

<b>A</b>	$(6)(-3)$	—	
<b>B</b>	$(-6)(-3)$	—	
<b>C</b>	$-6 - (-3)$	—	
<b>D</b>	$-18 \div -6$	—	

1	-3	2	3	3	-18	4	18
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QUESTION 24

/2

**Topic Resource: Properties of Addition**

The equation  $7 + x = x + 7$  , illustrates the

The equation  $(x + 4) + 6 = x + (4 + 6)$  , illustrates the

Choose one option for each blank section

<input type="text" value="1"/>	Commutative Property of Addition	<input type="text" value="2"/>	Commutative Property of Addition
<input type="text" value="1"/>	Associative Property of Addition	<input type="text" value="2"/>	Associative Property of Addition

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.

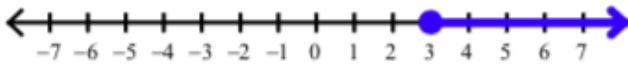
**Part 2:** What is the correct answer?

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   $x \leq 3$

C   $x \geq 3$

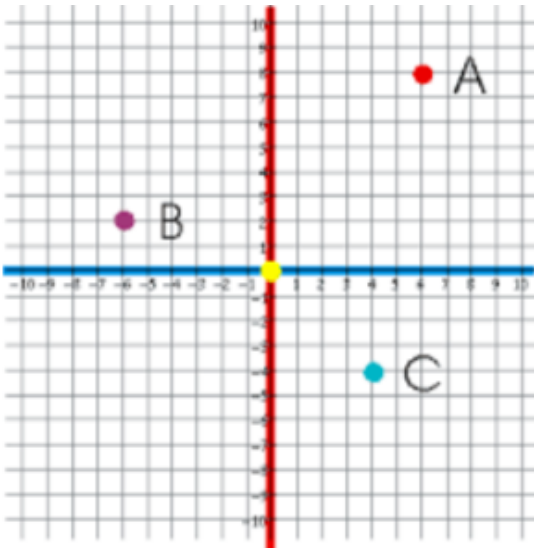
D   $x < 3$

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  60.8B  6080C  608D  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  \$ 133B  \$ 27C  \$ 83D  \$ 81

