Integrated Math II Summer Review Packet
2019 -2020

WEEK – 1

NAME: _____

DUE: <u>THE FIRST DAY OF SCHOOL</u>

The problems in this packet are designed to help you review topics from previous mathematics courses that are essential to your success in Integrated Math III. **You are** **expected to bring this completed packet to class on the first day of school.** In addition, this packet will count as part of your first quarter grade. **Upon returning, you will be** **ASSESSED on the content of this packet**. All contents outlined in the packet are Integrated Math II objectives. Neatly **SHOW YOUR WORK** on a separate sheet of paper.

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Summer Packet Gr 8 Entering Gr 9 Week 1/19-20 Collection: **Private**

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Q1: Rewrite in simplified exponential notation: $\left(2^{-4}\right)^{-3}$

Q2: Find the slope of the line that passes through the points $(10, 8)$ and $(4, 12)$.

Write your answer as a simplified fraction.

$m = $

Q3: Simplify and solve for x.

$5\left(x + 20\right) = 7x + 30$

$x = $

Q4: Write an equivalent expression so that each factor has a single power. Let m, n, and p be numbers.

$\left(m^3 n^2 p^5\right)^3 = $

Q5: Write the following quotient in scientific notation: $\left(\dfrac{1.4 \times 10^2}{2 \times 10^3}\right)$.

Q6: Alicia and Melissa did jumping jacks. The table below shows the number of jumping jacks that Alicia had done in different amounts of time.

Alicia	Time (minutes)	1	2	3	4	5	6	7	8
	Jumping Jacks	30	60	90	120	150	180	210	240

The graph below shows the number of jumping jacks Melissa had done in different amounts of time.
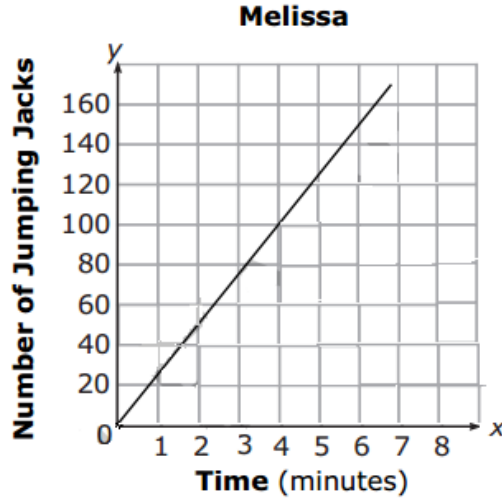
Melissa

Which choice **best** describes the difference between the rates at which the girls did jumping jacks?

A Melissa did 6 more jumping jacks per minute than Alicia.

B Alicia did 6 more jumping jacks per minute than Melissa.

C Melissa did 5 more jumping jacks per minute than Alicia.

D Alicia did 5 more jumping jacks per minute than Melissa.

Q7: **Part A**

Joan bought a soft drink for 3 dollars and 8 candy bars. She spent a total of 43 dollars. How much did each candy bar cost? Which equation matches this problem?

> a   ▼

Part B

How much did each candy bar cost?

> b   ▼

a.
- 8x + 3 = 43
- 8x = 46
- 43 = 8x - 3

b.
- $6.00
- $5.50
- $5.00

Q8: The slope of the line that passes through the point $(2, 4)$ and $(3, 8)$ is [   ] .

Q9: Simplify the expression

$$12x^{-6}y^{10} \cdot 3x^7 y$$

A $15xy^{11}$

B $36xy^{10}$

C $36x^{-42}y^{10}$
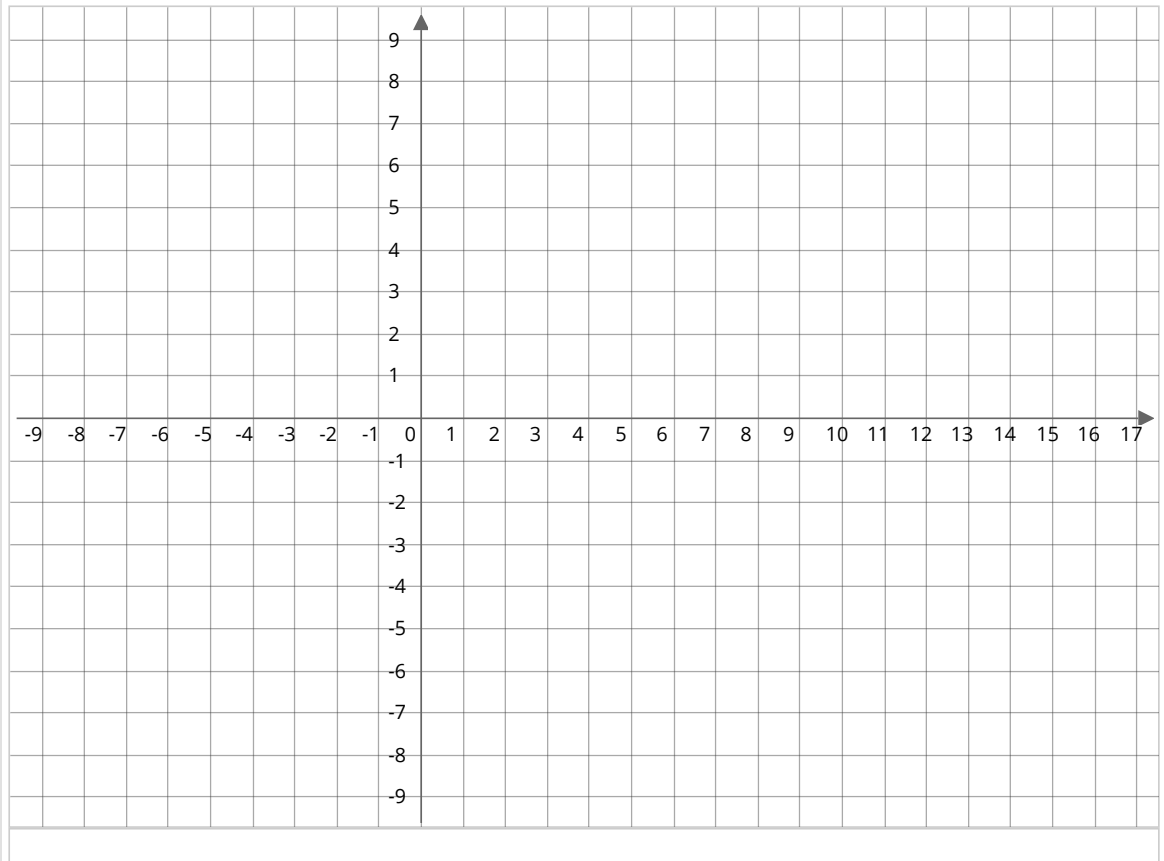
D $36xy^{11}$

Q10: Graph the line below:

$$y = -2x + 7$$

CLICK TO SELECT

Line AA

Undo | Redo | Reset | Delete

Q11: Solve the system of equations by using substitution.

$$y = 2x + 3$$
$$y = x + 2$$
$$(x, y) = \ (\boxed{} \ , \ \boxed{} \ )$$

Q12: Simplify the expression $4x^3 \times 2x^3$

A $8x^6$

B $8x^9$

C $2x^6$

D $2x^9$

Q13: Simplify the expression completely.

$$6a^7 b^9 \times 2a^{-3} b$$

A $12a^4 b^{10}$
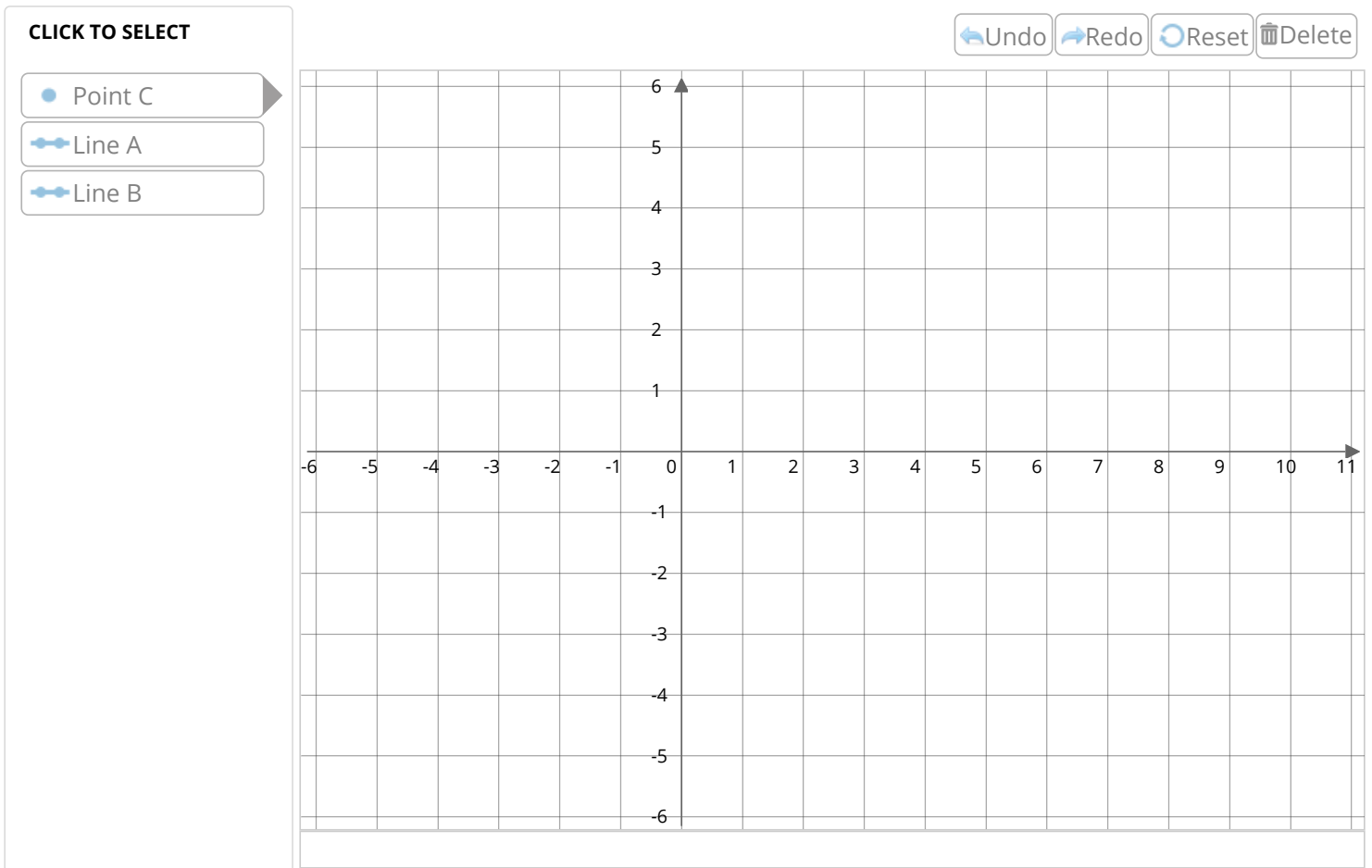
B $8a^4 b^{10}$

C $12a^{-21} b^9$

D $8a^4 b^9$

Q14: Graph the following equations and then indicate the point of intersection if it exists.

$y = 2x + 1$
$y = 4x - 1$
Graph two lines and a point.

CLICK TO SELECT

● Point C

Line A

Line B

↩Undo　➡Redo　⟳Reset　🗑Delete

Q15: How many times is 5×10^6 larger than 5×10^4 ?

Answer: [＿＿＿＿＿＿＿] times

Q16: An average drop of blood contains about 1.6×10^4 white blood cells. A rare drop of blood contains about 5×10^4 white blood cells. What is the difference between the number of white blood cells in a rare drop of blood and the number of white blood cells in an average drop of blood?

A 3.4×10^4

B -3.4×10^4

C 3.4×10^0

D 6.6×10^4

E 3.4×10^8

Q17: What is the solution to $\frac{3}{4}x + 2x - 3 = -\frac{1}{4}x + 21$?

The solution is [   ].

Q18: The equation of line s is $y = \frac{1}{3}x - 3$. The equation of line t is $y = -x + 5$. The equations of line s and t form a system of equations. The solution to the system of equations is located at point P. Which graph correctly shows line s, line t, and point P?

Ⓐ

Ⓑ

Ⓒ

Ⓓ

A) A

B) B

C) C
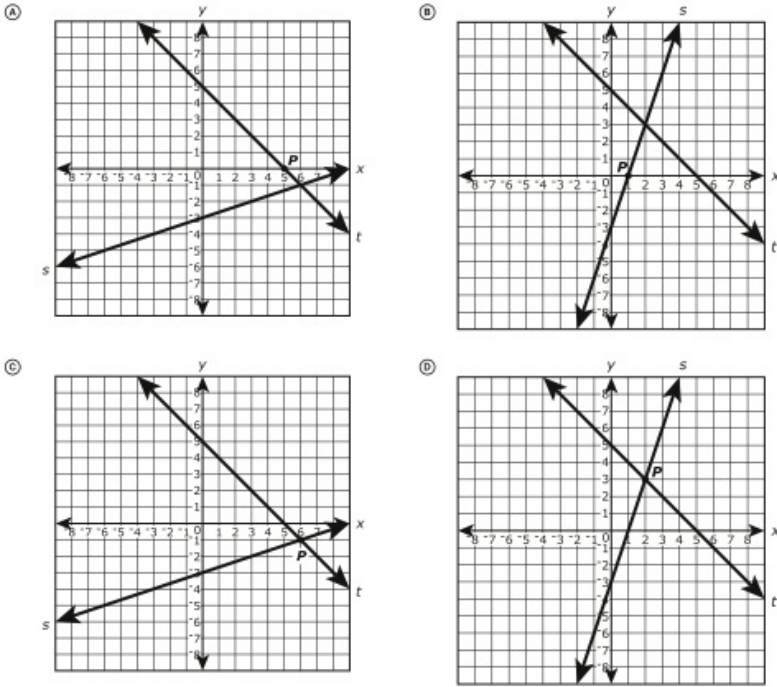
D) D

Q19: Solve the following system of equations using the substitution method.

$$x = 2y$$
$$2x + 5y = 9$$

$x =$ [ ] and

$y =$ [ ]