

Math Summer Packet 2017

General instructions for all math Summer Packets:

- ▶ Unless the directions tell you otherwise, do all work on a separate sheet of paper in numerical order
- ▶ Use a pencil and show all work
- ▶ Due date: **Be prepared to hand in the Summer Packet on Tuesday, August 29th.**
It will be counted as the first homework assignment of the year: Full credit if handed in and done well, no credit if not handed in, and at the teacher's discretion, half credit if incomplete or done badly.
- ▶ During the first week, summer packets will be returned with an answer sheet, and time permitted for questions
- ▶ **Assessment: Thursday or Friday, At the teacher's discretion**
- ▶ Not only are you expected to do this packet, you are expected to do it **well**. Use textbooks, online tutoring, etc. to help. Excuses such as "I forgot" or "I never had this" will not be accepted. If you want to be an Honors student, act like an Honors student.

Questions can be directed to Mr. Poulin: npoulin@theproutschool.org

Summer Packet Work For Geom H 2017

Name: _____

Please SHOW ALL work NEATLY in the space provided. Use a PENCIL and box in your answer.

I. Solve the following equations for x.

<p>A) $2(x + 5) = 3(x - 2)$</p>	<p>B) $180 - x = 3(90 - x)$</p>
<p>C) $x(x - 4) = (x - 3)^2$</p>	<p>D) $3x(x - 1) = (3x + 2)(x - 1)$</p>

II. Solve the following system of equations by the method stated.

<p>A) Substitution $\begin{cases} y = 5 - 2x \\ 5x - 6y = 21 \end{cases}$</p>	<p>B) Substitution $\begin{cases} x - 7y = 13 \\ 3x - 5y = 23 \end{cases}$</p>
<p>C) Elimination $\begin{cases} 3x + 4y = -10 \\ 5x - 2y = 18 \end{cases}$</p>	<p>D) Elimination $\begin{cases} 2x + 3y = 0 \\ 5x - 2y = -19 \end{cases}$</p>

III. Simplify the following square root expressions.

*Rationalize the den:

$$*Ex. \sqrt{\frac{9}{2}} = \frac{\sqrt{9}}{\sqrt{2}} = \frac{3}{\sqrt{2}} \rightarrow \frac{3}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{3\sqrt{2}}{\sqrt{4}} = \frac{3\sqrt{2}}{2}$$

A) $\sqrt{24}$	B) $\sqrt{300}$	C) $\sqrt{120}$	D) $\sqrt{\frac{1}{4}}$	E) * $\sqrt{\frac{5}{3}}$
F) $\sqrt{\frac{80}{25}}$	G) $(3\sqrt{8})^2$	H) $(2\sqrt{3})^2$	I) $2\sqrt{18}$	J) $5\sqrt{8}$

IV. Solve for x. Assume x represents a positive number. Simplify your answer.

A) $x^2 + 4^2 = 5^2$	B) $1^2 + x^2 = 3^2$
C) $x^2 + 5^2 = (5\sqrt{2})^2$	D) $x^2 + (7\sqrt{3})^2 = (2x)^2$

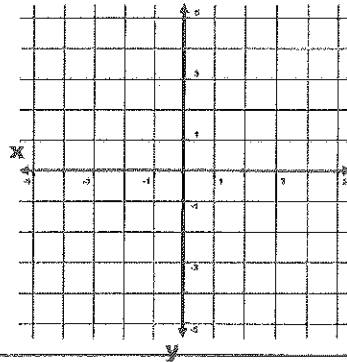
V. Solve the following proportions:

A) $\frac{2}{x-3} = \frac{6}{x-2}$	B) $\frac{10}{6x+7} = \frac{6}{2x+9}$
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VI. Find the equation of each line in the form stated using the following description. Then graph the line.

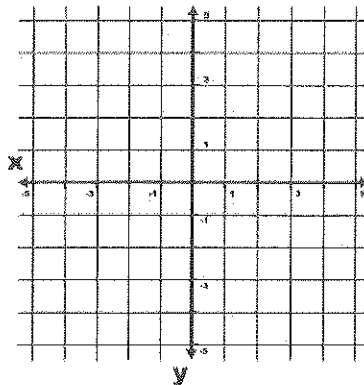
A) A line with a slope of 3 and contains the point (2, -1)

Standard Form: _____



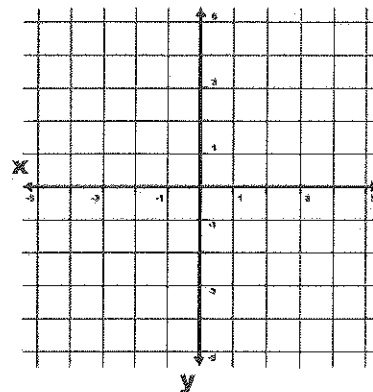
B) The line containing (4, 2) and (-6, 12)

Slope Intercept Form: _____



C) The line perpendicular to $y = -\frac{1}{2}x - 7$ and containing (1, 4)

Point Slope Form: _____



VII. Solve for the variable.

A) $V = \frac{1}{3}\pi r^2 h$; h

B) $A = \frac{1}{2}h(b_1 + b_2)$; b_1

