

# **PAINT BRANCH HIGH SCHOOL**

## ***MATH DEPARTMENT***

### *Honors Geometry Pre-Requisite Packet*

#### ***Instructions:***

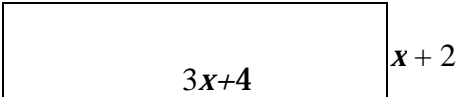
- SHOW ALL WORK that leads you to each solution in the space provided.
- You are permitted to use a calculator and notes from previous mathematics courses to help you, but you should do the work without any help from another person.
- All work needs to be completed and ready to turn in on the FIRST FRIDAY of school.
- This packet will count as part of your first quarter grade and there will be a QUIZ on the material.
- Additional copies of this packet may be printed from the PBHS website.

[www.paintbranchhighschool.org](http://www.paintbranchhighschool.org)

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**Student Name:** \_\_\_\_\_

**ID#:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Pd:** \_\_\_\_\_

<p>1. Determine the slope of the line through the points (5, 1) and (2, 7).</p>	<p>2. Determine the slope of the line through the points <math>(-\frac{1}{2}, -2)</math> and <math>(-\frac{3}{2}, 1)</math></p>
<p>3. Write the equation of the line passing through the points (3, -4) and (2, 6).</p>	<p>4. Solve for <math>x</math>: <math>3(x - 2) = 18</math></p>
<p>5. Solve for <math>x</math>: <math>7x - 8x + 4 = 5x - 2</math>.</p>	<p>6. Solve for <math>x</math>: <math>\frac{x}{6} = \frac{x+3}{9}</math></p>
<p>7. Solve for <math>x</math>: <math>3x^2 - 11x - 20 = 0</math></p>	<p>8. Multiply <math>(5x - 2)(3x + 8)</math></p>
<p>9. Find the area and perimeter for the figure below.</p>  <p>Area:</p> <p>Perimeter:</p>	<p>10. Find the <b>area</b> and <b>circumference</b> of a circle with radius 3.5 inches.</p> <p>Area:</p> <p>Circumference:</p>

11. Simplify  $\sqrt{441}$

12. Simplify  $\frac{3x^3y^4z^{-2}}{9x^{-4}y^6z^6}$

Use the quadratic formula:  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$  for Problems 13-14.

13.  $x^2 - 9x + 5$

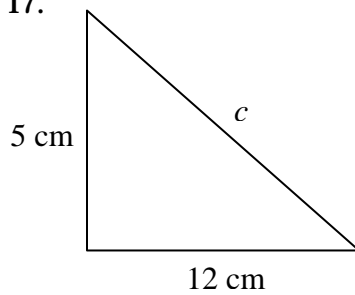
14.  $3x^2 + x + 4$

15. Factor  $x^2 - 5x - 24$

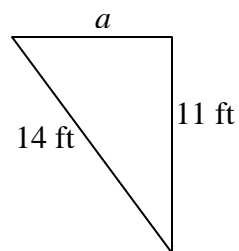
16. Factor  $x^2 - 25$

Use the Pythagorean Theorem:  $a^2 + b^2 = c^2$  to solve Problems 17-18.

17.

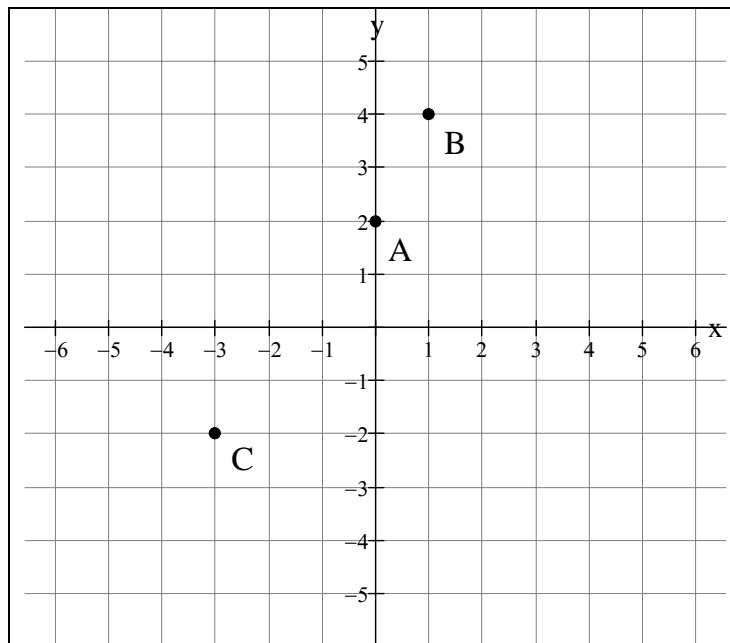


18.



Use the graph below to answer Problems 19-21.

<p>19. Give the coordinates of each lettered point.</p> <p>A _____</p> <p>B _____</p> <p>C _____</p>	<p>20. Given the following coordinates, plot the points on the coordinate plane above.</p> <p>D (-2, 3)</p> <p>E (1, 0)</p> <p>F (2, -3)</p>
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21. Write the equation of the line passing through Points B and C.