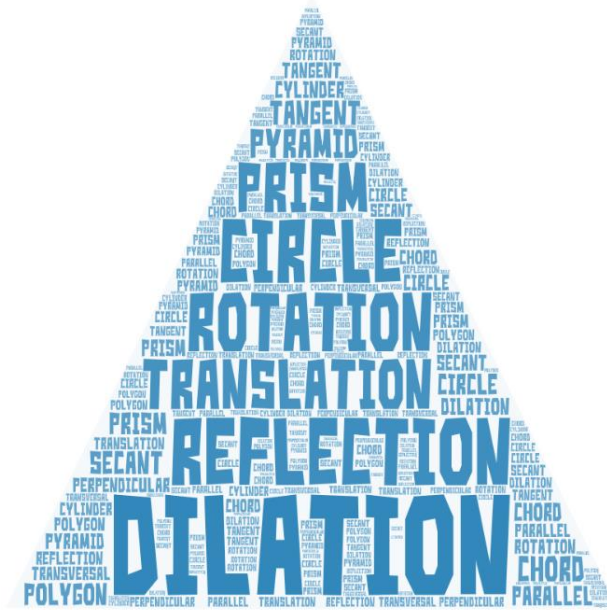


# Richard Montgomery High School

Summer Math Packet for students entering

## ON-LEVEL GEOMETRY



Before you get started, here is some important information:

The problems in this packet are designed to help you review topics from previous mathematics courses that are important to your success in Geometry.

Remember to always show your work using words, symbols or both! If you need some extra help, the QR codes/links will lead you to a video with a full explanation to a problem from each section.

Bring your finished packet with you to your Geometry class on the first day of school.

Enjoy your summer! We look forward to working with you soon! 😊

Full Name: \_\_\_\_\_

# Geometry Formulas

## Equations of Lines:

Slope-Intercept Form:  $y = mx + b$

## Coordinate Geometry:

Slope:  $\frac{y_2 - y_1}{x_2 - x_1}$

## Area/Circumference:

Triangle:  $A = \frac{1}{2}bh$

Rectangle:  $A = bh$

Trapezoid:  $A = \frac{1}{2}(b_1 + b_2)h$

Circle Area:  $A = \pi r^2$

Circle Circumference:  $C = 2\pi r = \pi d$

Part I – Simplify each expression.

See example



[bit.ly/3eMUDXQ](https://bit.ly/3eMUDXQ)

1)  $7x + 5 - 2x + 1$

2)  $-3x + 9 + 4x - 5$

3)  $(6x - 2) - (2x + 1)$

Part II – Solve for x. Be sure to show all your work!

See example



[bit.ly/2XUZBTD](https://bit.ly/2XUZBTD)

4)  $6x + 2 = 14$

5)  $3(x - 2) = 18$

6)  $-14 = 4x + 10$

7)  $(3x + 2) - (x - 16) = 32$

8)  $7x - 8x + 4 = 5x - 2$

9)  $\frac{x}{8} = \frac{6}{24}$

10)  $\frac{5}{7} = \frac{10}{x+2}$

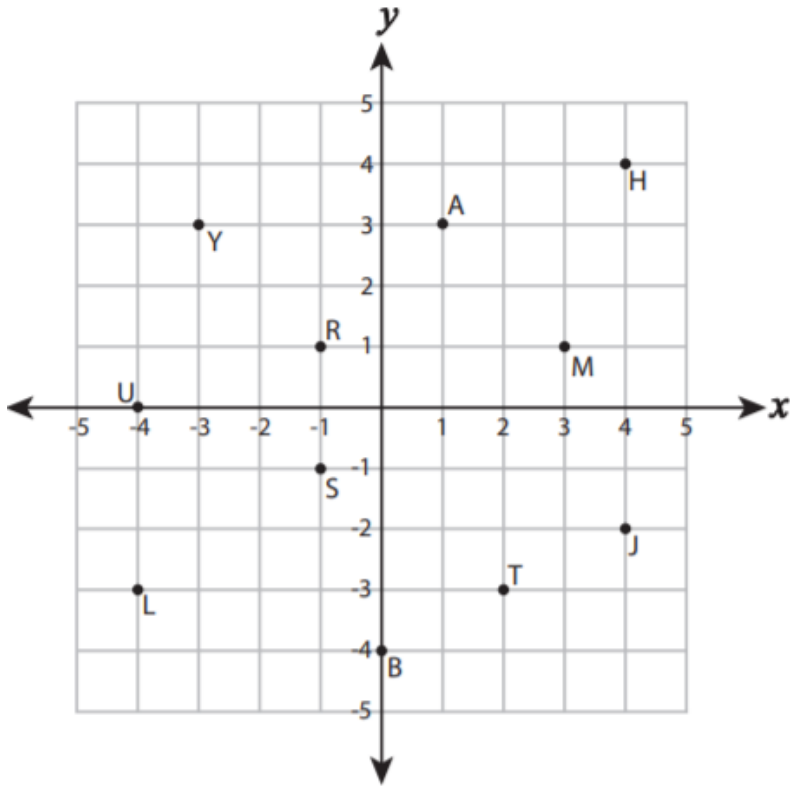
11)  $\frac{x}{3} - 8 = 2$

Part III – Identify the coordinates for each point on the coordinate plane.

See example



[bit.ly/3duFaTT](https://bit.ly/3duFaTT)



A \_\_\_\_\_

R \_\_\_\_\_

B \_\_\_\_\_

S \_\_\_\_\_

H \_\_\_\_\_

T \_\_\_\_\_

J \_\_\_\_\_

U \_\_\_\_\_

L \_\_\_\_\_

Y \_\_\_\_\_

Part IV - Find the slope of a line through each pair of points.

See example



[bit.ly/3gNun9r](https://bit.ly/3gNun9r)

12) (5, 1) and (2, 7)

13) (5, 3) and (-2, 3)

14) (2, -4) and (2, 6)

15)  $(-\frac{1}{2}, -2)$  and  $(-\frac{3}{2}, 1)$

Part V – Rewrite each equation in slope-intercept form.

16)  $4x + 2y = 16$

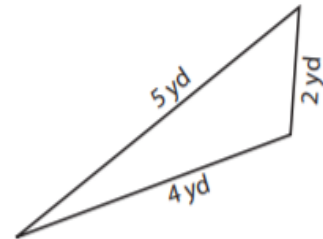
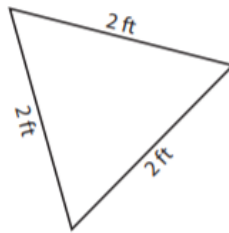
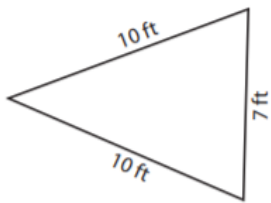
17)  $x - 3y = 6$

18)  $3x - 4y = 32$

See example



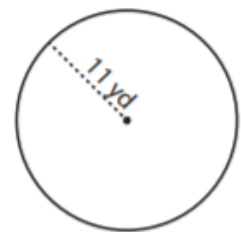
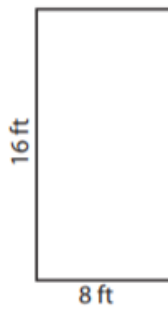
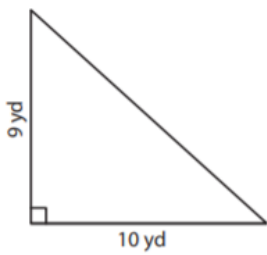
Part VI – Identify if the following triangles are scalene, isosceles, or equilateral.



See example



Part VII – Calculate the area of each figure.



See example

