

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

12th Grade - Advanced Mathematical Decision Making Summer Work



2024-2025

# Rising 12th Grade Summer Math Packet

Hi rising Seniors! Hope you are having a great summer so far! I put together just a few review questions for you before we jump into Senior Year Math! All of this content is a review from things you have learned in your high school years and they are skills that will help us in Senior Math this year!

## Directions:

- Complete all pages of the attached packet.
- Show **all** of your work. Try to work without a calculator, but if you need to use one, you can!
- You can get help from friends, family, or other sources, but do **not** use ChatGPT or PhotoMath. It's important that **you** understand the work because **you** need to understand this math for 12th grade.

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1. Change each percent into a decimal (hint: divide by 100!):

a. 75%

b. 8%

c. 15.2%

d. 2.3%

2. Change each decimal into a percent (hint: multiply by 100!)

a. .09

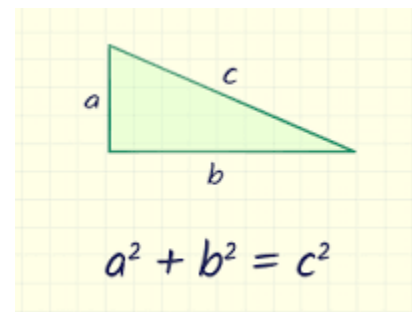
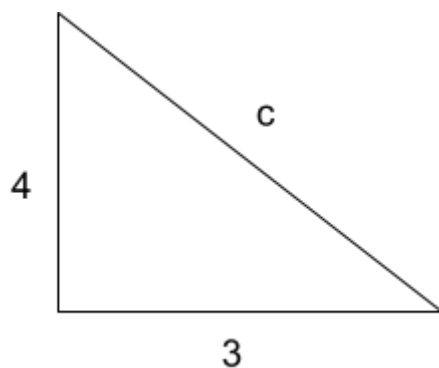
b. .77

c. 1.19

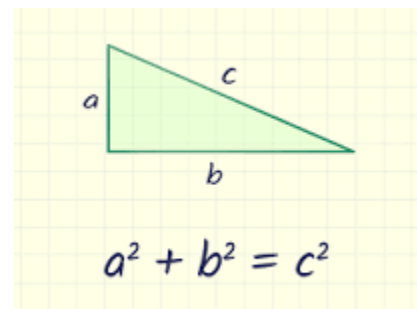
d. .5

3. Use the pythagorean theorem  $a^2 + b^2 = c^2$  to solve the following problems

a. Solve for c

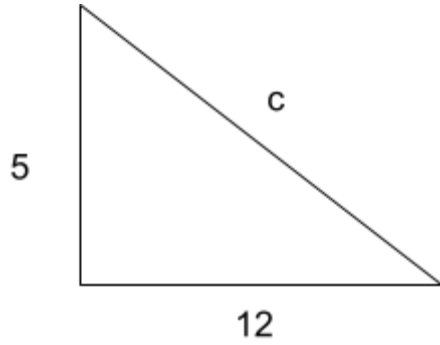


b. Solve for c

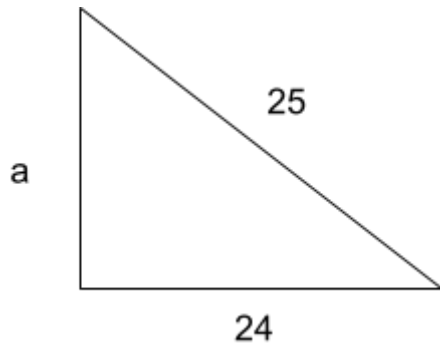


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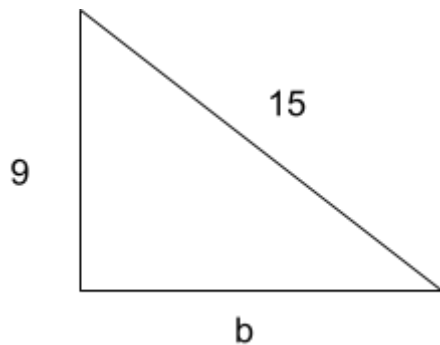
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c. Solve for a



d. Solve for b



4. Is the Histogram Graph to answer the following questions

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- a. How many students received between 0 and 2 books
  
  - b. How many total students are represented in this histogram?
  
  - c. If a student received 6 gifts, which bar would they be added to?
  
  - d. Most students received between \_\_\_\_\_ and \_\_\_\_\_ gifts
5. The slope equation is  $y = mx + b$   
Where  $m$  = slope and  $b$  = y-intercept (or your starting value)  
For each question, identify the slope and y-intercept:
- a.  $y = 4x - 9$   
Slope =  
  
Y-intercept =

The slope equation is  $y = mx + b$

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Where  $m$  = slope and  $b$  = y-intercept (or your starting value)

For each question, identify the slope and y-intercept:

b.  $y = -10x + 2$

Slope =

Y-intercept =

c.  $y = -\frac{1}{2}x - \frac{3}{4}$

Slope =

Y-intercept =