

Test # 1

Summer 2, 2021

Directions:

- 1) Do the exam on paper with your hand (do not type). Write neatly.
 - 2) Numerate pages and print your name on each page.
 - 3) Numerate each problem and do problems in order: 1, 2, 3,...
 - 4) Do problems in one column.
 - 5) Show all your work in details. Answers without work will not be accepted.
 - 6) Create a **single PDF** file with your solutions. (Other formats will not be accepted).
 - 7) Assign name to the PDF file: YourLastName
 - 8) Upload PDF file to DropBox using the link provided.
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1. Write an equation of the line in slope-intercept form passing through the points $(-7, -3)$ and $(-2, 4)$.
 2. Write an equation of the line in slope-intercept form passing through the point $(-2, -6)$ that is perpendicular to the line $5x + 3y = 1$.
 3. Solve the system of equations
$$\begin{cases} x - y + z = 4 \\ 2x - y + 3z = 8 \\ -2x + 2y - z = -9 \end{cases}$$
 4. Factor **completely** $5x^2y - 180y$.
 5. Factor $6x^3 + 4x^2 - 9x - 6$.
 6. Factor $4u^4 - 9v^{64}$.
 7. Solve the equation by **factoring**. Write the answers in fractional form. $6x^2 - x - 15 = 0$
 8. Solve the equation by **completing the square**. Write the answers in simplest radical form.
$$x^2 + 6x - 3 = 0$$
 9. Solve the equation by **quadratic formula**. Do not round the answer. $4x^2 = 7x - 5$.
 10. Divide. Represent the answer in standard form $a + bi$. $(5 - 6i) \div (4 - 3i)$.