Readiness Assurance Outcomes

Before beginning this module, each student should be able to...

- Add Euclidean vectors and multiply Euclidean vectors by scalars.
- Add complex numbers and multiply complex numbers by scalars.
- Add polynomials and multiply polynomials by scalars.
- Perform basic manipulations of augmented matrices and linear systems (Standard(s) E1,E2,E3).

Readiness Assurance Resources

The following resources will help you prepare for this module.

- https://www.khanacademy.org/math/precalculus/vectors-precalc/vector-addition-subtraction/v/adding-and-subtracting-vectors
- https://www.khanacademy.org/math/precalculus/vectors-precalc/combined-vector-operations/v/combined-vector-operations-example
- https://www.khanacademy.org/math/precalculus/imaginary-and-complex-numbers/adding-and-subtracting-v/adding-complex-numbers
- https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/adding-and-subtractive-v/adding-and-subtractive-polynomials-1

Readiness Assurance Test

Choose the most appropriate response for each question.

1) Simplify the following vector expression.

$$2\begin{bmatrix} 3 \\ -1 \\ 0 \end{bmatrix} - 3\begin{bmatrix} 0 \\ 2 \\ 1 \end{bmatrix}$$

- (b) $\begin{bmatrix} 6 \\ -8 \\ -3 \end{bmatrix}$
- (c) $\begin{bmatrix} 3 \\ 2 \\ -5 \end{bmatrix}$
- 2) Simplify the complex number expression -4(3-2i)+2(5+i).
 - (a) 3 7i
- (c) -2 + 10i
- (d) -1 5i
- 3) Simplify 3f(x) 2g(x) where $f(x) = 7 x^2$ and $g(x) = 2x^3 + x 1$.
 - (a) $x^3 + 4x 5$
- (b) $-4x^3 3x^2 2x + 23$ (c) $3x^3 + 5x^2 3x + 17$ (d) $-x^3 + 19x^2 4$

4) TODO some problems based on module E.