

## Practice

## Complex Number - Equations

Level: 2

1. Simplify  $\frac{7 + 6i}{2 - 3i}$

2. Simplify  $\frac{5 - i}{3 + 4i}$

**A**  $\frac{11}{25} - \frac{23}{25}i$

**B**  $-8 - 27i$

**A**  $-\frac{8}{13} - \frac{27}{13}i$

**B**  $-\frac{4}{13} + \frac{33}{13}i$

**C**  $-\frac{8}{13} - \frac{27}{13}i$

**D**  $-\frac{4}{13} + \frac{33}{13}i$

**C**  $-8 - 27i$

**D**  $\frac{11}{25} - \frac{23}{25}i$

3. Is the following system of equations dependent or independent? Solve for x and y:

$$2x + 4y = 6$$

$$x + 2y = 3$$

**A** **Dependent****B** **Independent**

4. Is the following system of equations dependent or independent? Solve for x and y:

$$2x + 3y = 7$$

$$4x - y = 1$$

**A** **Dependent****B** **Independent**5. If  $\theta$  is an angle in standard position whose terminal side intersects a circle (not the unit circle) at the point  $(4, -3)$ , what is  $\cos(\theta)$ ?**A** **4/5****C** **3/5****B** **4/7****D** **1**7. Question: If  $\theta$  is an angle in standard position whose terminal side intersects the unit circle at the point  $(3/5, 4/5)$ , what is  $\cos(\theta)$ ?**A** **3/5****C** **1/3****B** **2/5****D** **2/3**