

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 θ 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 θ 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**