**Coordinate Algebra Support**

**Form 201**

**EOCT Review Practice– Unit 2**

**Use the following graph for question 1.**



1. **Which system of inequalities is represented by the graph shown?**
	1. $\left\{\begin{matrix}x\geq 1\\y\leq 2x\end{matrix}\right\}$
	2. $\left\{\begin{matrix}y>1\\y\leq 2x\end{matrix}\right\}$
	3. $\left\{\begin{matrix}y>2x\\y>1\end{matrix}\right\}$
	4. $\left\{\begin{matrix}y<2x\\x<1\end{matrix}\right\}$

**Use the following information for question 2.**

|  |  |
| --- | --- |
| **2(x + 7) + 3x = 12** | **Given** |
| **2x + 14 + 3x = 12** | **?** |
| **5x + 14 = 12** | **Simplify** |
| **5x = -2** | **Subtraction Prop. of Eq.** |
| $$x=-\frac{2}{5}$$ | **Division Prop. of Eq.** |

1. **What is the missing reason?**
	1. Addition
	2. Subtraction
	3. Transitive Property
	4. Distributive Property

**Use the following graph for question 3.**

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1. **A system of linear equations has been graphed in the diagram. Determine a reasonable solution for the system of equations.**
	1. (-2, 3)
	2. (2, 3)
	3. (2, -3)
	4. (-2, -3)

**Use the following system for question 4.**

$$\begin{matrix} 3x-2y=10 \\5x+y=4\end{matrix}$$

1. **When solving this system of equations by elimination, which could be the resulting equation when a variable has been eliminated?**
	1. 13x = 18
	2. -7x = 2
	3. -7y = 62
	4. 8x - y = 14

**Use the following graph for question 5.**



1. **The graph shown is for the inequality y ≥ x. The graph has one thing wrong. What is it?**
	1. The shading is on the wrong side of the boundary line.
	2. The boundary line should be dotted or dashed.
	3. The boundary line has the wrong y-intercept.
	4. The boundary line has the wrong slope.

**Use the following graph for question 6.**



1. **Which system of inequalities is shown in the graph?**
	1. y > x – 7 and 3x – y > -1
	2. y ≥ x – 7 and 3x – y < -1
	3. y ≥ x – 7 and 3x – y ≥ -1
	4. y ≤ x – 7 and 3x – y ≤ -1

**Use the following graph for question 7.**



1. **Which of the sets of equations represents the two lines graphed?**
	1. y = x + 2 and y = x – 4
	2. y = x + 2 and y = -x - 4
	3. y = -x + 2 and y = x – 4
	4. y = -x + 2 and y = -x - 4

**Use the following system for question 8.**

$$\begin{matrix} 2x-2y=6 \\ 3x+2y=9 \end{matrix}$$

1. **Solve the system of equations.**
	1. x = 0, y = 3
	2. x = 3, y = 0
	3. x = 1, y = -2
	4. x = -2, y = 1
2. **Solve: 5y - 10 = -25.**
	1. y = -3
	2. y = -7
	3. y = 3
	4. y = 7

**Use the following graph for question 10.**

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1. **A system of linear equations has been graphed in the diagram. Determine a reasonable solution for the system of equations.**
	1. (2, -1)
	2. (-1, 2)
	3. (-2, 1)
	4. (0, -2)
2. **Match the following phrase to the correct mathematical expression:**

two less than the product of *y* and 8

* 1. $8(y-2)$
	2. $8y-2$
	3. $\frac{y-2}{8}$
	4. $\frac{y}{8}-2$

**Use the following system for question 12.**

$$\begin{matrix} y=x+2 \\ 2x-y=-4 \end{matrix}$$

1. **Solve the system of equations using substitution.**
	1. (-6,8)
	2. (-6,-4)
	3. (-2,-4)
	4. (-2,0)

**Use the following graph for question 13.**

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1. **Which system of inequalities is represented by the graph?**
	1. $\left\{\begin{matrix}y<-x\\y<x\end{matrix}\right\}$
	2. $\left\{\begin{matrix}y>-x\\y>x\end{matrix}\right\}$
	3. $\left\{\begin{matrix}y\leq -x\\y\leq x\end{matrix}\right\}$
	4. $\left\{\begin{matrix}y\geq -x\\y\geq x\end{matrix}\right\}$

**Use the following graph for question 14.**

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1. **Which inequality's solution is represented by the graph?**
	1. -2x + 6 ≤ 52
	2. -2x + 6 ≥ 52
	3. 2x + 6 ≤ -52
	4. 2x - 6 ≥ -52
2. **Find the value of x when** $5-x=\frac{1}{2}x+4$
	1. -6
	2. 2
	3. $\frac{2}{3}$
	4. $\frac{3}{2}$

**Use the following system for question 16.**

$$\begin{matrix} 3a+2b=2 \\ –2a+b=8 \end{matrix}$$

1. **Solve the system of equations.**
	1. (-2,4)
	2. (4,-2)
	3. (-4,-2)
	4. $(\frac{5}{4},-\frac{1}{2})$
2. **Sarah is saving to buy a new phone. She needs $150, and she has already saved $63. Write an equation to model this situation. Let x represent the amount of money Sarah needs.**
	1. x - 63 = 150
	2. x + 63 = 150
	3. x + 150 = 63
	4. x - 150 = 63
3. **Solve: 5 - 2x < 7.**
	1. x < -1
	2. x > -1
	3. x < -12
	4. x > -12
4. **Solve:** $4+\frac{x}{7}=2$
	1. -14
	2. 10
	3. 12
	4. 42
5. **Match the following mathematical equation to the appropriate phrase:**

$$ \frac{x}{5}+4=20 $$

* 1. four more than *x* divided by 5 is 20
	2. the sum of *x* and 4, divided by 5 is 20
	3. *x* added to the quotient of 4 and 5 is 20
	4. 5 divided by *x* plus 4 is 20