Forms of Equations – Worksheet #2

Write each equation in STANDARD FORM! \((Ax + By = C)\)

1) \[8 - 3x = 10y\]
\[-10y\]
\[8 - 3x - 10y = 0\]
\[8\]
\[-3x - 10y = -8\]

3) \[2 = \frac{3}{4}y + 3x\]
\[\frac{3}{4}y + 3x = 2\]

2) \[-4x = 6y + 11\]
\[-6y\]
\[-4x - 6y = 11\]

4) \[3x - 0.2 = -0.11y\]
\[+0.11y\]
\[3x - 0.2 + 0.11y = 0\]
\[+0.2\]
\[3x + 0.11y = 0.2\]

Write each equation in SLOPE-INTERCEPT FORM! \((y = mx + b)\)

5) \[4x + 2y = 8\]
\[-4x\]
\[-4x\]
\[\frac{2y}{2} = \frac{8 - 4x}{2}\]
\[y = 4 - 2x\]
\[y = -2x + 4\]

7) \[6y - 18 = 2x\]
\[+18\]
\[\frac{6y}{6} = \frac{2x + 18}{6}\]
\[y = \frac{1}{3}x + 3\]

6) \[5y - 2x = 15\]
\[+2x\]
\[+2x\]
\[\frac{5y}{5} = \frac{15 + 2x}{5}\]
\[y = 3 + \frac{2}{5}x\]
\[y = \frac{2}{5}x + 3\]

8) \[24 = 3x - 4y\]
\[+4y\]
\[+4y\]
\[24 + 4y = 3x\]
\[-24\]
\[\frac{4y}{4} = \frac{3x - 24}{4}\]
\[y = \frac{3}{4}x - 6\]
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9) \[-6x - 3y = 3\]
   \[
   \begin{align*}
   &+6x \quad +6x \\
   \text{switch terms} \quad \Rightarrow \\
   &\frac{-3y = 3+6x}{-3} \\
   \end{align*}
   \]
   \[
   y = \frac{-3+6x}{-3}
   \]
   \[
   y = -2x - 1
   \]

11) \[10x - 16 = 4y\]
    \[
    \begin{align*}
    &4y \\
    \text{switch sides} \quad \Rightarrow \\
    &\frac{5}{2}x - 4 = y
    \end{align*}
    \]

12) \[10 - 10x - 2y = 0\]
    \[
    \begin{align*}
    &+10x \quad +10x \\
    &10 - 2y = 10x \\
    &-10 \quad -10 \\
    \]
    \[
    \frac{-2y = 10x - 10}{-2}
    \]
    \[
    y = -5x + 5
    \]

13) Which of the following is written in standard form?

A. \[-x - y = 20\]  
B. \[-7x + 20 = 7y\]  
C. \[1.2x + 4y + 1 = 0\]  
D. \[4 + \frac{1}{3}x = -2y\]

14) Which of the following is in slope-intercept form?

A. \[x = y + 4\]  
B. \[y = 7x - 0.5\]  
C. \[y + 30 = 2x\]  
D. \[2x + 3y = 6\]

15) Which of the following is written in standard form?

A. \[8.8y + 3.3x = 1.1\]  
B. \[-4x + 8y = 0\]  
C. \[-x = 3y + 1\]  
D. \[8x - 4 = 15y\]

16) Which of the following is in slope-intercept form?

A. \[3x - 10y = 2\]  
B. \[\frac{1}{3}x + y = \frac{2}{5}\]
C. \[y = 4 + 5x\]  
D. \[y = \frac{3}{5}x - 1\]