FINALS Review - Equation Solving:

1. Solve $55t + 150 = 436$.

- $t = 3.38$
- $t = 5.2$
- $t = 2.13$
- $t = 10.7$

2. Solve $-12 = 4m + 5$.

- $m = -4\frac{1}{4}$ $\left(-\frac{17}{4}\right)$
- $m = 4\frac{1}{4}$ $\left(\frac{17}{4}\right)$
- $m = 1\frac{3}{4}$ $\left(\frac{7}{4}\right)$
- $m = -1\frac{3}{4}$ $\left(-\frac{7}{4}\right)$

3. Which statement describes how you can solve the equation $\frac{x}{15} + 4 = 60$ in two steps?

- Subtract 4 from both sides, and then multiply both sides by 15.
- Subtract 4 from both sides, and then divide both sides by 15.
- Subtract –4 from both sides, and then multiply both sides by 15.
- Multiply 60 by 15, and then subtract 4.

5. Solve the equation $4 = \frac{(12 - z)}{-6}$. (Multiply both sides by -6 first)

- $z = 36$
- $z = 2$
- $z = 12$
- $z = 14$

1. Solve the equation $3(x - 8) = -15$. (Distribute first)

- $x = -13$
- $x = -\frac{7}{3}$
- $x = -\frac{23}{3}$
- $x = 3$

2. Solve the equation $48 = -6(x - 7)$. Distribute first.

- $x = -1$
- $x = -\frac{55}{6}$
- $x = 1$
- $x = -15$

3. Solve the equation $12y - \frac{2}{3} = -1$. multiply every part by 3 first

- $y = -\frac{1}{36}$
- $y = -\frac{7}{36}$
- $y = -\frac{7}{24}$
- $y = -\frac{1}{24}$

4. Solve the equation $12n + 8 - 5n = 42$. Simplify Left side first.

- $n = \frac{34}{7}$
- $n = \frac{50}{7}$
- $n = \frac{34}{17}$
- $n = -2$

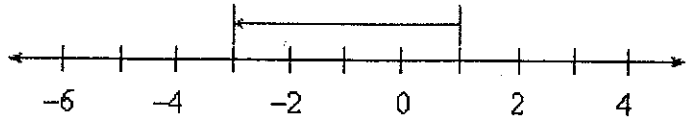
5. John and his friend order lunch at a local sandwich shop. They each order a soft drink that costs $1.65. John orders a whole ham sandwich and his friend orders half of a ham sandwich. Their total bill is $12.54. What equation can you use to find the cost c of a sandwich, and what is the value of c?

- $2(1.65) + c + \frac{1}{2}c = 12.54;\ c = 6.16$
- $1.65 + c + \frac{1}{2}c = 12.54;\ c = 14.84$
- $1.65 + c + \frac{1}{2}c = 12.54;\ c = 6.60$
- $2(1.65) + c + \frac{1}{2}c = 12.54;\ c = 13.86$

1. Simplify $\begin{bmatrix} \frac{1}{2} & -3 \\ 9 & -2\frac{3}{4} \\ 0 & -6 \end{bmatrix} + \begin{bmatrix} -\frac{1}{4} & \frac{1}{2} \\ -6 & 4 \\ \frac{1}{3} & 2 \end{bmatrix}$.

- $\begin{bmatrix} \frac{1}{4} & -2\frac{1}{2} \\ 3 & 1\frac{1}{4} \\ \frac{1}{3} & -4 \end{bmatrix}$
- $\begin{bmatrix} -\frac{1}{2} & -2\frac{1}{2} \\ -3 & 1\frac{1}{2} \\ -\frac{1}{3} & -4 \end{bmatrix}$
- $\begin{bmatrix} \frac{1}{2} & -2\frac{1}{2} \\ 3 & 1\frac{1}{4} \\ \frac{1}{3} & -4 \end{bmatrix}$
- $\begin{bmatrix} \frac{3}{4} & 2\frac{1}{2} \\ 15 & -1\frac{1}{4} \\ -\frac{1}{3} & 4 \end{bmatrix}$

2. Write the expression modeled by the number line shown. Then find the sum.



- $-3 + 4 = 1$
- $1 + (-3) = 4$
- $1 + (-4) = -3$
- $4 + (-3) = 1$

3. Evaluate $n + (-3.8)$ for $n = 1.7$.

- 2.1
- –2.1
- 5.5
- –5.5

4. Evaluate $-n + 12$ for $n = 1.7$.

- 13.7
- 10.3
- –13.7
- –10.3

5. Simplify $\begin{bmatrix} -7 & 8 \\ 2 & -3 \end{bmatrix} + \begin{bmatrix} -3 & 4 \\ -6 & 3 \end{bmatrix}$.

- $\begin{bmatrix} 4 & 12 \\ 4 & 0 \end{bmatrix}$
- $\begin{bmatrix} -4 & 12 \\ -4 & -6 \end{bmatrix}$
- $\begin{bmatrix} -4 & 12 \\ 4 & -6 \end{bmatrix}$
- $\begin{bmatrix} -10 & 12 \\ -4 & 0 \end{bmatrix}$

1. Simplify $-\frac{5}{8} - \frac{3}{4}$.

Get a common denominator first..

- $\frac{1}{8}$
- $-\frac{1}{8}$
- $1\frac{3}{8}$
- $-1\frac{3}{8}$

2. Evaluate $-x - y$ for $x = -8$ and $y = -4$.

- –12
- 12
- –4
- 4

3. On Tuesday, the closing price of an ABC company share was \$38.50. It had risen \$4.08 from the previous day. Find the closing price of an ABC stock on Monday.

- \$34.42
- –\$34.42
- \$42.58
- –\$42.58

4. Subtract $\begin{bmatrix} 4 & -9 \\ 8 & -4 \end{bmatrix} - \begin{bmatrix} -2 & -8 \\ 4 & -3 \end{bmatrix}$.

- $\begin{bmatrix} -2 & 17 \\ -4 & 1 \end{bmatrix}$
- $\begin{bmatrix} 2 & -17 \\ 4 & -7 \end{bmatrix}$
- $\begin{bmatrix} 6 & -1 \\ 4 & -1 \end{bmatrix}$
- $\begin{bmatrix} -6 & 1 \\ -4 & 1 \end{bmatrix}$

5. Evaluate $-3a - |b|$ for $a = 4.2$ and $b = -3.1$.

- –15.7
- –9.5
- 15.7
- 9.5