

10-26-17

Aim: SWBAT evaluate expressions with rational numbers.

HW: Finish WS & Pg. 268 # 38 - 39

Test Tuesday

Do Now: Correct hw

Pg. 267 # 3-22

3) $7.8 \cdot 2.6 = 20.28$ 4) $3.75(-0.4) = -1.5$

$$\begin{array}{r} 7.8 \\ \times 2.6 \\ \hline 468 \\ + 1560 \\ \hline 20.28 \end{array}$$

$$\begin{array}{r} 3.75 \\ \times 0.4 \\ \hline 1500 \\ + 000 \\ \hline 1.500 \end{array}$$

↑
drop extra
zeros

5) $(-8.2)(0.7) = -5.74$ 6) $0.5 \div 1.25 = 0.4$

$$\begin{array}{r} 8.2 \\ \times 0.7 \\ \hline 574 \\ + 00 \\ \hline 5.74 \end{array}$$

$$\begin{array}{r} 1.25 \overline{) 0.50} \\ \underline{50} \\ 0 \end{array}$$

$$\begin{array}{r} 0.4 \\ 125 \overline{) 50.0} \\ \underline{500} \\ 0 \end{array}$$

7) $(25)(0.2) = 5$ 8) $(2.4)(0.3) = 0.72$

$$\begin{array}{r} 25 \\ \times 0.2 \\ \hline 50 \\ + 00 \\ \hline 05.0 \end{array}$$

$$\begin{array}{r} 2.4 \\ \times 0.3 \\ \hline 72 \\ + 00 \\ \hline 0.72 \end{array}$$

9) $13.2 \div 1.1 = 12$ 10) $(13.65)(1.1) = 15.015$

$$\begin{array}{r} 1.1 \overline{) 13.2} \\ \underline{12} \\ 132 \\ \underline{11} \\ 22 \\ \underline{22} \\ 0 \end{array}$$

$$\begin{array}{r} 13.65 \\ \times 1.1 \\ \hline 1365 \\ + 1365 \\ \hline 15.015 \end{array}$$

⑪ $4.8 \div 1.2 = 4$

$$\begin{array}{r} 1.2 \overline{)4.8} \\ \underline{12} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 12 \overline{)48.} \\ \underline{48} \\ 0 \\ \hline \end{array}$$

⑫ $4.9 \div 0.07 = 70$

$$\begin{array}{r} 0.07 \overline{)4.90} \\ \underline{49} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 70 \\ 7 \overline{)490} \\ \underline{49} \\ 00 \\ \underline{00} \\ 0 \\ \hline \end{array}$$

⑬ $-8 \div (-3.2) = 2.5$

$$\begin{array}{r} 3.2 \overline{)8.} \\ \underline{64} \\ 160 \\ \underline{160} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 2.5 \\ 32 \overline{)80.0} \\ \underline{64} \\ 160 \\ \underline{160} \\ 0 \\ \hline \end{array}$$

⑭ $5 \div (-0.1) = -50$

$$\begin{array}{r} 0.1 \overline{)5.} \\ \underline{10} \\ 50 \\ \underline{50} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 50. \\ 1 \overline{)50.} \\ \underline{50} \\ 00 \\ \underline{00} \\ 0 \\ \hline \end{array}$$

⑮ $(5.41)(0.35) = 1.8935$

$$\begin{array}{r} 5.41 \\ \times 0.35 \\ \hline 2705 \\ 1623 \\ + 000 \\ \hline 1.8935 \end{array}$$

⑯ $4.844 \div 0.56 = 8.65$

$$\begin{array}{r} 0.56 \overline{)4.844} \\ \underline{448} \\ 364 \\ \underline{336} \\ 280 \\ \underline{280} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 8.65 \\ 56 \overline{)484.40} \\ \underline{448} \\ 364 \\ \underline{336} \\ 280 \\ \underline{280} \\ 0 \\ \hline \end{array}$$

⑰ $-0.57 \div 0.38 = -1.5$

$$\begin{array}{r} 0.38 \overline{)0.57} \\ \underline{38} \\ 190 \\ \underline{190} \\ 0 \\ \hline \end{array} \quad \begin{array}{r} 1.5 \\ 38 \overline{)57.0} \\ \underline{38} \\ 190 \\ \underline{190} \\ 0 \\ \hline \end{array}$$

⑱ $(-2.687)(-9) = 24.183$

$$\begin{array}{r} 2.687 \\ \times 9 \\ \hline 24.183 \end{array}$$

(19) $-37.41 \div 4.3 = -8.7$

$$4.3 \overline{) 37.41}$$

$$\begin{array}{r} 8.7 \\ 43 \overline{) 374.1} \\ - 344 \downarrow \\ \hline 301 \\ - 301 \\ \hline 0 \end{array}$$

(21) $(6.025)(48.2) = 290.405$

$$\begin{array}{r} 6.025 \\ \times 48.2 \\ \hline 12050 \\ 48200 \\ + 24100 \\ \hline 2904050 \end{array}$$

Drop extra zero

(20) $(0.098)(-0.55) = -0.0539$

$$\begin{array}{r} 0.098 \\ \times 0.55 \\ \hline 0490 \\ + 0490 \\ \hline 05390 \end{array}$$

Drop extra zero

(22) $1.11 \div 0.925 = 1.2$

$$0.925 \overline{) 1.110}$$

$$\begin{array}{r} 1.2 \\ 925 \overline{) 1110.0} \\ - 925 \downarrow \\ \hline 1850 \\ - 1850 \\ \hline 0 \end{array}$$

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Order of Operations with Rationals

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Evaluate if $a = 6.28$ and $b = -0.35$. Write your answer as a decimal.

$\frac{5}{2} \rightarrow 2\frac{1}{2} \rightarrow 2.5$

<p>1. $a - \frac{5}{2}$ $6.28 - 2.5$ 3.78</p> <p><i>Handwritten:</i> $\begin{array}{r} 6.28 \\ -2.5 \\ \hline 3.78 \end{array}$</p>	<p>2. $\frac{3}{8} + a$ $0.375 + 6.28$ 6.655</p> <p><i>Handwritten:</i> $\begin{array}{r} 0.375 \\ +6.28 \\ \hline 6.655 \end{array}$</p>	<p>3. $b - \frac{3}{4}$</p>	<p>4. $\frac{9}{2} + b$</p>
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Evaluate.

<p>5. $(3.4 + 5.4)^2 - 1.3$ $2^2 - 1.3$ $4 - 1.3$ 2.7</p> <p><i>Handwritten:</i> $\begin{array}{r} 3.4 \\ +5.4 \\ \hline 8.8 \\ \hline 8.8 \\ \hline 77.44 \\ -1.3 \\ \hline 76.14 \end{array}$</p>	<p>6. $\frac{2}{3} - \frac{3}{5} + 3^2$ $\frac{2}{3} + \frac{3}{5} + 9$ $\frac{10}{15} + \frac{9}{15} + 9$ $1\frac{19}{15} + 9$ $10\frac{4}{15}$</p>	<p>7. $2 \cdot \frac{2}{3} + (-1\frac{1}{4})$ $\frac{4}{3} - 1\frac{1}{4}$ $\frac{4}{3} - \frac{5}{4}$ $\frac{16}{12} - \frac{15}{12}$ $\frac{1}{12}$</p>
<p>8. $-5\frac{2}{9} + 3.7 + 5\frac{2}{9}$ 3.7</p>	<p>9. $-24 - (-\frac{1}{2}) - 12.5$</p>	<p>10. $16(-\frac{3}{8}) + 16(\frac{1}{4})$ $-6 + 4$ -2</p>
<p>11. $-5\frac{5}{7} + 8 - 3\frac{2}{7}$ $-8\frac{7}{7} + 8$ $-9 + 8$ -1</p>	<p>12. $\frac{16}{20} - (-1.8) - \frac{4}{5}$ $\frac{4}{5} + 1.8 - \frac{4}{5}$ 1.8</p>	<p>13. $3\frac{1}{6} + 20.3 - (-5\frac{5}{6})$ $3\frac{1}{6} + 20.3 + 5\frac{5}{6}$ $9 + 20.3$ 29.3</p>

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<p>14. $-2.2 \cdot (-2) \div \left(-\frac{1}{4}\right) \cdot 5$</p> <p>$-2.2 \cdot (-2) \cdot (-4) \cdot 5$</p> <p>$-2.2 \cdot 40$</p> <p>$-88$</p> <p><i>Handwritten multiplication:</i> $\begin{array}{r} 2.2 \\ \times 40 \\ \hline 00 \\ + 880 \\ \hline 88.0 \end{array}$</p>	<p>15. $4.2 \cdot \left(-\frac{1}{3}\right) \div \frac{1}{6} \cdot (-10)$</p>	<p>16. $\frac{2}{5} \div \left(-1 + \frac{3}{5}\right) - 4^2$</p> <p>$\frac{2}{5} \div -\frac{2}{5} - 16$</p> <p>$-1 - 16$</p> <p>$-17$</p>
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Evaluate if $x = -5$ and $y = 6$.

<p>17. x^2</p> <p>$(-5)^2$</p> <p>25</p> <p><i>Handwritten note:</i> need ()</p>	<p>18. $-y + x$</p> <p>$-6 + (-5)$</p> <p>-11</p>	<p>19. $\frac{y+4}{2x} \rightarrow \frac{6+4}{2(-5)} \rightarrow \frac{10}{-10} \rightarrow -1$</p>
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Evaluate each expression if $a = 3$, $b = -4$, and $c = -8$.

<p>20. $\frac{bc}{2} \rightarrow \frac{(-4)(-8)}{2} \rightarrow \frac{32}{2} \rightarrow 16$</p>
<p>21. $\frac{c^2}{a-b} \rightarrow \frac{(-8)^2}{3-(-4)} \rightarrow \frac{64}{7}$</p>
<p>22. $\frac{c+a}{-2a+b} \rightarrow \frac{-8+3}{(-2)(3)+(-4)} \rightarrow \frac{-5}{-6+(-4)} \rightarrow \frac{-5}{-10} \rightarrow \frac{1}{2}$</p>