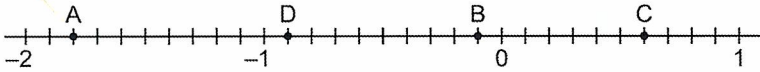


# RATIONAL NUMBERS REVIEW

NAME ANSWERS

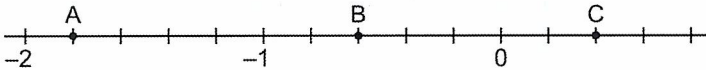
1. Write the rational number represented by each letter as a decimal. (2)



A = -1.8 B = -0.1 C = 0.6 D = -0.9

2. Write the rational number represented by each letter as a fraction. (2)

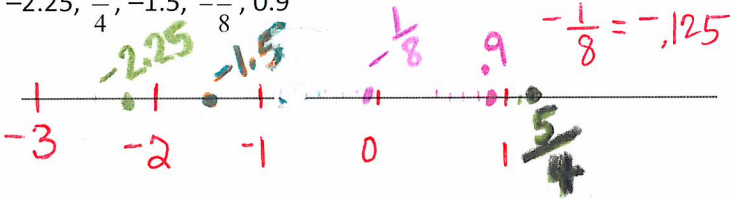
*note: there are 5 "ticks" between each whole value*



A =  $-\frac{8}{5}$  B =  $-\frac{3}{5}$  C =  $\frac{2}{5}$  D =     

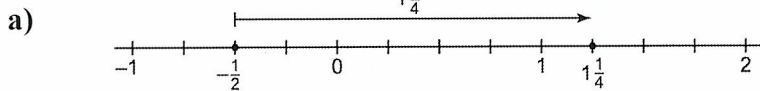
3. Sketch a number line and mark each rational number on it. Order the numbers from greatest to least. (2)

$-2.25, \frac{5}{4}, -1.5, -\frac{1}{8}, 0.9$

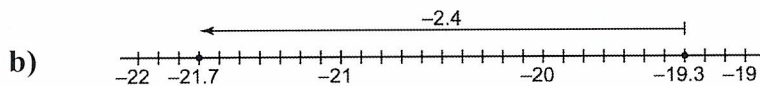


4. Write the addition statement that each number line represents. (1 each)

$-\frac{1}{2} + \frac{3}{4} = \frac{1}{4}$



$-19.3 + (-2.4) = -21.7$



5. Determine each sum or difference (8)

*Common denominators*

a)  $-\frac{3}{4} + \frac{1}{2}(\frac{2}{2})$       b)  $2\frac{2}{5} + (-4\frac{1}{2})$

$-\frac{3}{4} + \frac{2}{4}$

$-\frac{1}{4}$

$(\frac{2}{2})\frac{12}{5} + (-\frac{9}{2})(\frac{5}{5})$

$\frac{24}{10} + (-\frac{45}{10})$

$-\frac{21}{10} \Rightarrow -2\frac{1}{10}$

c)  $-\frac{3}{4} - \frac{1}{2}(\frac{2}{2})$

$-\frac{3}{4} - \frac{2}{4}$

$-\frac{5}{4} \Rightarrow -1\frac{1}{4}$

c)  $3\frac{3}{5} - (-5\frac{1}{2})$

$(\frac{2}{2})\frac{18}{5} + \frac{11}{2}(\frac{5}{5})$

$\frac{36}{10} + \frac{55}{10}$

$\frac{91}{10} \Rightarrow 9\frac{1}{10}$

6. Determine each sum or difference. (8)

a)  $-3.6 + (-21.9)$  *bigger neg. #*

$-3.6$   
 $+ (-21.9)$   

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 $-25.5$

b)  $-0.81 + 2.4$

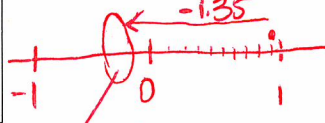
*can also be written*  
 $2.4 - .81$

$2.40$   
 $- .81$   

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 $1.59$

c)  $0.94 - 1.35$



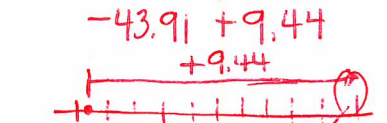
*estimation*

$1.35$   
 $- .94$   

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 $-.41$

d)  $-43.91 - (-9.44)$



*estimate*

$43.91$   
 $- 9.44$   

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 $34.47$

7. Determine each product. (8)

a)  $(\frac{10}{7})(-\frac{13}{8})$

$\frac{10 \times -13}{7 \times 8} = \frac{-130}{56} \Rightarrow -\frac{65}{28}$

*reduce !!*

b)  $(-4\frac{3}{5})(-2\frac{5}{12})$

$4\frac{3}{5} \times 2\frac{5}{12}$   
 $8\frac{6}{5} \times 2\frac{5}{12}$   
 $16\frac{6}{5} \times \frac{5}{12}$   
 $16\frac{6}{5} \times \frac{1}{4}$   
 $4\frac{6}{5}$   
 $4\frac{1}{5}$

c)  $(1.19)(-13.2)$

*3 places*

$1.19$   
 $1188$   
 $1320$   

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 $15708$

8. Determine each quotient. (8)

a)  $\frac{7}{2} \div (-\frac{13}{6})$

$\frac{7}{2} \times (-\frac{6}{13})$

$-\frac{21}{13} \Rightarrow -1\frac{8}{13}$

d)  $(-8.65)(-1.6)$

*3 places*

$8.65$   
 $\times 1.6$   

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 $5190$   
 $8650$   

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 $13840$

b)  $-\frac{11}{5} \div -\frac{19}{4}$

$(-\frac{21}{5}) \div (-\frac{43}{4})$

$-\frac{11}{5} \times -\frac{4}{19}$

$+\frac{44}{95}$

answers will be negative

c)  $16.4 \div (-5.5)$

$$\begin{array}{r} 5.5 \overline{) 16.4} \\ \underline{11.0} \\ 5.40 \\ \underline{4.95} \\ 4.50 \\ \underline{4.40} \\ 100 \\ \underline{55} \\ 45 \end{array}$$

2.9818181

same, so it repeats!

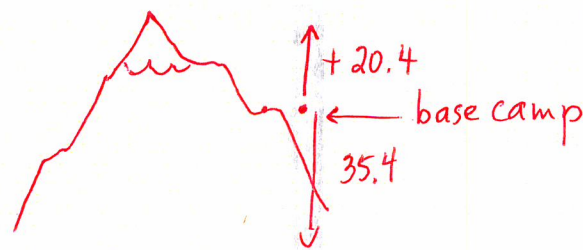
d)  $(-0.98) \div 12.4$

$$\begin{array}{r} 12.4 \overline{) 9.8} \\ \underline{12.4} \\ 98 \\ \underline{86.8} \\ 1120 \\ \underline{1116} \\ 40 \end{array}$$

$\Rightarrow -0.0790$

11. Two climbers leave base camp at the same time. Climber A ascends 20.4 m, while climber B descends 35.4 m.

Sketch a diagram to illustrate the situation. (1) mountain



Write a subtraction statement using rational numbers to solve the problem. (1)

$20.4 - (-35.4) = \text{distance apart}$

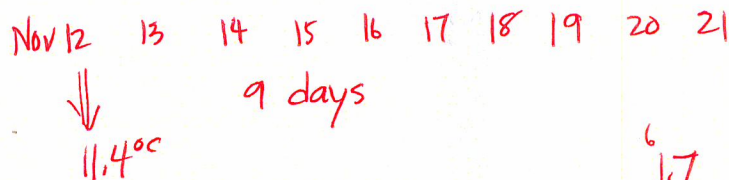
How far apart are the climbers? (1)

They are 55.8 m apart.

$$\begin{array}{r} 20.4 \\ + 35.4 \\ \hline 55.8 \end{array}$$

12. From November 12th to November 21st, the temperature in Burnaby, B.C. dropped an average of  $1.7^\circ\text{C}$  each day.

Suppose the temperature on the morning of November 12th was  $11.4^\circ\text{C}$ . What was the temperature on the morning of November 21st? (1)



$11.4 + (-1.7)(9) = \text{temp}$

$11.4 + (-15.3) = -3.9$

The temperature on Nov 21st was  $-3.9^\circ\text{C}$

$$\begin{array}{r} 11.4 \\ - 1.7 \\ \hline 9 \\ \hline 15.3 \\ - 11.4 \\ \hline 3.9 \end{array}$$

13. A diver descends 3.2 m in 5 min. What was his average rate of descent in metres per minute? (1)

$$\frac{3.2 \text{ m}}{5 \text{ min}} = \frac{x}{1 \text{ min}}$$

His average rate of descent was  $.64 \text{ m/min}$ .

$$\begin{array}{r} .64 \\ 5 \overline{) 3.20} \\ \underline{30} \\ 20 \end{array}$$

9. Evaluate.

a)  $\left[ \frac{2}{3} \times \left( -\frac{1}{2} \right) \right] + \frac{5}{6}$  (2)

$\left( \frac{2}{2} \right) - \frac{1}{3} + \frac{5}{6}$

$\frac{-2}{6} + \frac{5}{6}$

$\frac{3}{6} \Rightarrow \frac{1}{2}$

$\frac{17}{4} - \frac{7}{2} \left( \frac{2}{2} \right)$

$\frac{17}{4} - \frac{14}{4}$

b)  $1\frac{5}{9} - \left( -2\frac{1}{6} \right) + \left[ 4\frac{1}{4} + \left( -3\frac{1}{2} \right) \right] \div \frac{2}{5} \left( \frac{3}{4} \right)^2$

$\frac{14}{9} + \frac{13}{6} + \left[ \frac{9}{16} \right] \div \frac{2}{5}$

3AD QUESTION

$\frac{14}{9} + \frac{13}{6} + \left( \frac{9}{16} \times \frac{5}{2} \right)$

60PS!

$\frac{14}{9} + \frac{13}{6} + \frac{45}{32}$

(4)

$\frac{14}{9} \left( \frac{192}{192} \right) + \frac{13}{6} \left( \frac{288}{288} \right) + \frac{45}{32} \left( \frac{54}{54} \right)$

2430

10. Sarah borrowed \$40.25 from her parents for a new sweater. She earns \$17.50 for a night of baby-sitting and gives this to her parents.

a) Write an addition statement to represent this situation. (1)

$-40.25 + (17.50) = \text{money owing}$

b) How much does Sarah now owe? (1)

Sarah still owes \$22.75

$$\begin{array}{r} 40.25 \\ - 17.50 \\ \hline 22.75 \end{array}$$

$\rightarrow 1.5 + 2.16 + (.75)^2 \div .4$

$3.72 + .5625 \div .4$

$3.72 + 1.40625$

$\Rightarrow 5.13$