

Chapter 2

Ch. 2 Practice Test

Name Solution Key Per. ALL

Complete the statement using $<$, $>$, or $=$.

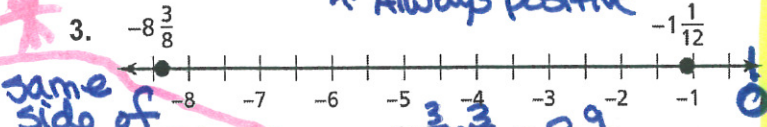
1. $-2.34 > -2.43$ *Further right / left*

2. $\frac{16}{11} = 1.45$

1.45
 $11 \overline{) 16.00}$
 $-15 \downarrow$
 100
 $-95 \downarrow$
 50
 $-44 \downarrow$
 60
 $-55 \downarrow$
 5
Repeating

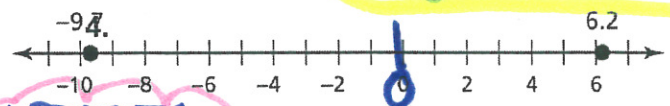
Find the distance between the two numbers on the number line.

Always positive



same side of 0, SUBTRACT Absolute Values

$8 \frac{3}{8} \cdot \frac{3}{3} = 8 \frac{9}{24}$
 $-1 \frac{1}{12} \cdot \frac{2}{2} = -1 \frac{2}{24}$
 $\hline 7 \frac{7}{24}$



OPPOSITE SIDES OF 0, ADD absolute values

9.7
 $+6.2$
 $\hline 15.9$

Add or subtract. Write fractions in simplest form.

5. $15.36 + (-12.095)$

15.360
 -12.095
 $\hline +3.265$

OPPOSITE DIRECTIONS, SUBTRACT went further up, so answer is +

6. $-7.91 - (-5.28)$

7.91
 -5.28
 $\hline -2.63$

(removing weights) OPPOSITE DIRECTIONS, Subtract went down more, so answer is -

7. $-3 \frac{7}{9} + (-2 \frac{1}{3})$ *(Add weights) going same direction, Add 9*

$-3 \frac{7}{9} \rightarrow -3 \frac{7}{9}$
 $+ -2 \frac{1}{3} \cdot \frac{3}{3} = -2 \frac{3}{9}$
 $\hline -5 \frac{10}{9}$
 $-5 + -1 \frac{1}{9} = -6 \frac{1}{9}$

8. $\frac{13}{4} - (-4 \frac{9}{10})$ *remove weights same direction, ADD*

$\frac{13}{4} \cdot \frac{5}{5} = \frac{65}{20}$
 $+ 4 \frac{9}{10} \cdot \frac{2}{2} = 4 \frac{18}{20}$
 $\hline 4 \frac{83}{20}$
 $4 + 4 \frac{3}{20} = 8 \frac{3}{20}$

Evaluate the expression when $x = \frac{5}{8}$ and $y = -\frac{5}{3}$

9. $-2x + y$

$-2(\frac{5}{8}) + (-\frac{5}{3})$
 $-\frac{5}{4} + (-\frac{5}{3})$

$-\frac{5}{4} \cdot \frac{3}{3} = -\frac{15}{12}$

$-\frac{5}{3} \cdot \frac{4}{4} = -\frac{20}{12}$

10. $3x + |y|$
 $12 \overline{) 35}$
 -24
 $\hline 11$

$3(\frac{5}{8}) + |-\frac{5}{3}|$
 $\frac{15}{8} + \frac{5}{3}$
 $\frac{15}{8} \cdot \frac{3}{3} = \frac{45}{24}$
 $\frac{5}{3} \cdot \frac{8}{8} = \frac{40}{24}$
 $\hline \frac{85}{24} = 3 \frac{13}{24}$

11. You spend $3 \frac{2}{3}$ hours hiking and an additional $\frac{3}{4}$ hour to rest.

a. How much time did you spend hiking and resting?

b. How much more time did you spend hiking than resting?

ADD
 $3 \frac{2}{3} + \frac{3}{4}$
 $3 \frac{8}{12} + \frac{3}{4}$
 $3 \frac{8}{12} + \frac{9}{12}$
 $3 \frac{17}{12}$
 $3 + 1 \frac{5}{12} = 4 \frac{5}{12}$
subtract
 $3 \frac{2}{3} - \frac{3}{4}$
 $3 \frac{8}{12} - \frac{9}{12}$
 $3 \frac{-1}{12}$
 $3 - \frac{1}{12} = 2 \frac{11}{12}$

ABSOLUTE VALUE

Evaluate.

12. $3\frac{1}{5} - (-\frac{7}{2}) + (-1)$

Remove weights

Same direction, add

$$3\frac{1}{5} + 2\frac{7}{5} = 3\frac{8}{5} = 3\frac{1}{10} + 3\frac{7}{10} = 6\frac{8}{10} = 6\frac{4}{5}$$

$$6\frac{4}{5} + (-1) = 5\frac{4}{5}$$

$3\frac{37}{10} = 3 + 3\frac{7}{10}$

13.

① Change to improper fractions
 ② Predict sign of answer
 ③ simplify before you multiply
 ④ change to mixed #

$$-2\frac{1}{3} \times 5\frac{1}{4}$$

$$(-\frac{7}{3}) (\frac{21}{4}) = -\frac{49}{4} = -12\frac{1}{4}$$

$$4 \overline{) 49} = 12 \frac{1}{4}$$

14. $7.452 \div (-2.16) = -3.45$

Now it's 216 into 7452

$$\begin{array}{r} 3450 \\ 216 \overline{) 7452} \\ \underline{-648} \\ 972 \\ \underline{-864} \\ 1080 \\ \underline{-1080} \\ 0 \end{array}$$

15.

$0.1 \times (-10.5) - 4.76$

$$\begin{array}{r} -10.5 \\ \times .1 \\ \hline -1.05 \end{array}$$

$-1.05 - 4.76$

Same Direction, ADD

$$\begin{array}{r} -1.05 \\ -4.76 \\ \hline -5.81 \end{array}$$

17. The table shows the changes in rainfall (in inches) from the monthly average of four months. What is the mean change?

Month	May	June	July	August
Change (inches)	1.05	-0.58	-2.12	-2.67

③ Divide by # of months

$$\frac{1.08}{4} = -1.08 \text{ in/month on average}$$

① ADD ALL THE NEGATIVES

$$\begin{array}{r} -0.58 \\ -2.12 \\ -2.67 \\ \hline -5.37 \end{array}$$

② ADD (-) w/ (+) SUBTRACT

$$\begin{array}{r} -5.37 \\ +1.05 \\ \hline -4.32 \end{array}$$

18. A recipe calls for $2\frac{1}{2}$ cups of sugar. You have $2\frac{1}{3}$ cups of sugar. Do you have enough sugar?

If not, how much more sugar is needed? Explain your answer.

$$2\frac{1}{2} \cdot \frac{3}{3} = 2\frac{3}{6}$$

$$- 2\frac{1}{3} \cdot \frac{2}{2} = -2\frac{2}{6}$$

$$2\frac{1}{2} > 2\frac{1}{3}$$

No, there is NOT enough sugar

Need $\frac{1}{6}$ cup more of sugar

19. A 10.5-gallon aquarium is $\frac{2}{3}$ full. How much water is in the aquarium?

Find $\frac{2}{3}$ of 10.5

$$\frac{2}{3} \times 10.5$$

since $\frac{2}{3}$ is a repeating decimal, turn 10.5 into a fraction.

$$\frac{2}{3} \times 10\frac{1}{2} \rightarrow \frac{2}{3} \times \frac{21}{2} = 7 \text{ gallons of water in the aquarium}$$

20. How many 0.45-ounce packages of cinnamon can be made with 3.15 ounces of cinnamon?

$$\begin{array}{r} 700 \\ 45 \overline{) 315} \\ \underline{-315} \\ 0 \end{array}$$

7 bags