

UNIT 2: REAL NUMBERS REVIEW

Label each number as a whole number, an integer, or rational. Then put in order from least to greatest.

(Section 2.1) 5.2 $\frac{51}{10} = 5.1$
 1. 5, 4.9, $\frac{26}{5}$, $5\frac{1}{10}$ $4.9, 5, 5\frac{1}{10}, \frac{26}{5}$ 2. $-3, -\frac{10}{3}, -3.25, -3\frac{2}{5}$ $-3\frac{2}{5}, -\frac{10}{3}, -3.25, -3$

5 = whole, integer, rational

4.9 = rational

$\frac{26}{5}$ = rational

$5\frac{1}{10}$ = rational

-3 = integer, rational

$-\frac{10}{3}$ = rational

-3.25 = rational

$-3\frac{2}{5}$ = rational

Perform the indicated operation. (Sections 2.2 and 2.3)

(If you start with a fraction, end with a fraction. If you start with a decimal, end with a decimal)

Round to the nearest hundredth!

3. $-4 + (-5)$ -9	4. $4.5 + (-5.2)$ 9.7	5. $-\frac{3}{4}(-5)$ $-\frac{3}{4}(-\frac{5}{1}) = \frac{15}{4}$
6. $\frac{2}{9} \div (-\frac{7}{5})$ $\frac{2}{9}(-\frac{5}{7}) = \frac{-10}{63}$	7. $4\frac{2}{3} + (-5)$ $\frac{14}{3} - 5 = \frac{14}{3} - \frac{15}{3} = \frac{-1}{3}$	8. $-4(-5)$ 20

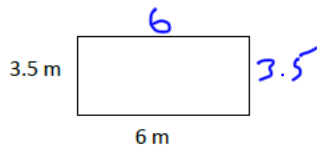
9. $-40 \div (-5)$ 8	10. $\frac{3}{5}(\frac{5}{6}) = \frac{15}{30} = \frac{1}{2}$	11. $\frac{4}{3} + 2\frac{1}{3}$ $\frac{4}{3} + \frac{7}{3} = \frac{11}{3}$
12. $-2 - 9$ -11	13. $7 + (-15)$ -8	14. $-2 \div \frac{3}{4}$ $-\frac{2}{1}(\frac{4}{3}) = \frac{-8}{3}$

Simplify each expression. (Section 2.4)

15. $6(3y - 5)$ $18y - 30$	16. $(4m - 1)2 + 8$ $8m - 2 + 8$ $8m + 6$	17. $6r + 2(r + 4)$ $6r + 2r + 8$ $8r + 8$
18. $3h - 14 - h + 10$ $3h - 1h - 14 + 10$ $2h - 4$	19. $7(w - 5) + 3(3 + 2w)$ $7w - 35 + 9 + 6w$ $7w + 6w - 35 + 9$ $13w - 26$	20. $-(2s - 3) + 17s$ $-2s + 3 + 17s$ $-2s + 17s + 3$ $15s + 3$

Application – Area and Perimeter, Domain and Range, Graph, Recipe

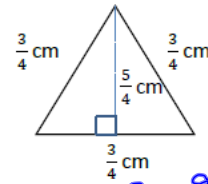
21. Find the area and perimeter of the rectangle.
 $p =$ add up all the sides $A = lw$



Perimeter = $3.5 + 6 + 3.5 + 6 = 19\text{ m}$

Area = $3.5(6) = 21\text{ m}^2$

22. Find the area and perimeter of the triangle.
 $p =$ add up all the sides $A = \frac{1}{2}bh$



Perimeter = $\frac{3}{4} + \frac{3}{4} + \frac{3}{4} = \frac{9}{4}\text{ cm}$

Area = $\frac{1}{2}(\frac{3}{4})(\frac{5}{4}) = \frac{15}{32}$

23. Given the set of numbers in the domain below, use the function to find the range.

Domain $\{-2.5, -\frac{3}{4}, 0, 4\}$

Range $\{-1, \frac{5}{4}, 4, 12\}$

Function $y = 4 + 2x$

$$\begin{array}{l} y = 4 + 2x \\ y = 4 + 2(-2.5) \\ 4 - 5 \\ -1 \end{array}$$

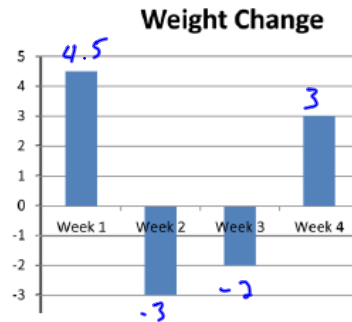
$$\begin{array}{l} y = 4 + 2x \\ y = 4 + 2(-\frac{3}{4}) \\ 4 - \frac{6}{4} \\ \frac{16}{4} - \frac{6}{4} = \frac{10}{4} = \frac{5}{2} \end{array}$$

$$\begin{array}{l} y = 4 + 2x \\ y = 4 + 2(0) \\ 4 + 0 \\ 4 \end{array}$$

$$\begin{array}{l} y = 4 + 2x \\ y = 4 + 2(4) \\ 4 + 8 \\ 12 \end{array}$$

24. Bob records his weight change for a month.
 What is his total change?

$4.5 - 3 - 2 + 3 = 2.5\text{ pounds}$



25. Mr. Kelly is reading Martha Stewart's Living magazine one day. He comes across a delicious recipe for refreshing strawberry lemonade. Mr. Kelly only wants to make half the recipe. Change the recipe so that it makes a half of batch of lemonade.

Serves 9	Serves $\frac{9}{2}$ or 4.5
• 1.5 pints of strawberries	0.75 pints of strawberries
• $\frac{20}{9}$ teaspoons of sugar	$\frac{10}{9}$ teaspoons of sugar
• 10 tablespoons of lemon juice	5 tablespoons of lemon juice
• $4\frac{3}{4}$ liters of water	$\frac{19}{8}$ liters of water

Divide by 2 or multiply by one half!

$\frac{1}{2}$ or 0.5