

Unit 1
Review Concepts 1 - 5

Concept 1 - Integer Operations: Simplify the Expression

1. $-14 + 9$ -5

2. $-5 - 6$
 $-5 + -6$ -11

3. $-5(-8)$ 40

4. $36 \div (-6)$ -6

Concept 2 - Order of Operations: Simplify the Expression if $a = -3, b = 4,$ and $c = 12$

5. $a + c \div b - a$
 $-3 + 12 \div 4 - (-3)$
 $-3 + 3 - (-3)$
 $0 - (-3)$
 $0 + 3$
3

6. $b^2 + a^2 - c$
 $(4 \times 4) + (-3 \times -3) - 12$
 $16 + (-3 \times -3) - 12$
 $16 + 9 - 12$
 $25 - 12$
13

Concept 3 - Rational Numbers

7. Convert into a mixed number. -4.26
 $-4 \frac{26}{100} \div 2 =$ $-4 \frac{13}{50}$

8. Convert into a decimal: $\frac{3}{8}$

$$\begin{array}{r} 0.375 \\ 8 \overline{) 3.000} \\ \underline{-24} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$
 0.375

Concept 4 – Adding & Subtracting Rational Numbers

$$9. 4\frac{2}{5} - \left(-6\frac{1}{2}\right)$$

$$4\frac{4}{10} + 6\frac{5}{10}$$

$$\boxed{10\frac{9}{10}}$$

$$10. 3\frac{1}{3} - 4\frac{5}{6} \quad 3\frac{1}{3} + -4\frac{5}{6}$$

$$4\frac{5}{6} - 3\frac{2}{6} = 1\frac{3}{6} = \boxed{-1\frac{1}{2}}$$

$$11. -9.24 + 2.89$$

$$8\cancel{9}.24^{14}$$

$$-2.89$$

$$\boxed{-6.35}$$

$$12. -13.6 - 2.754$$

$$-13.6 + -2.754$$

$$+ 13.600$$

$$+ 02.754$$

$$\boxed{-16.354}$$

Concept 5 – Multiplying & Dividing Rational Numbers

$$13. \left(-\frac{2}{5}\right)\left(-1\frac{1}{4}\right)$$

$$\frac{2}{5} \times \frac{5}{4} =$$

$$\boxed{\frac{1}{2}}$$

$$14. -4\frac{2}{3} \div 2\frac{1}{6}$$

$$\frac{14}{3} \div \frac{13}{6}$$

$$\frac{14}{3} \times \frac{6}{13} =$$

$$\frac{28}{13} = \boxed{-2\frac{2}{13}}$$

$$15. 0.15 \times (-0.6) \text{ (3)}$$

$$\begin{array}{r} 3 \\ 15 \\ \times 6 \\ \hline \end{array}$$

$$\boxed{-0.090}$$

or

$$\boxed{-0.09}$$

$$16. -4.2 \div -12$$

$$12 \overline{) 4.200}$$

$$\begin{array}{r} 0.35 \\ 12 \overline{) 4.200} \\ \underline{-36} \\ 60 \\ \underline{-60} \\ 0 \end{array}$$

$$\boxed{0.35}$$

Application – Are you really ready?!?

17. The following table shows the amount of strokes, above / below par, in half a game of golf. What is the golfer's score?

Hole	1	2	3	4	5	6	7	8	9
Score	0	-1	2	-2	0	1	-1	0	-1

$$0 + (-1) + 2 + (-2) + 0 + 1 + (-1) + 0 + (-1) = -2$$

So, 2 under par

18. Sarah has a jumbo piece of licorice. It is 8 feet long! Sarah decides to share her licorice with some friends. She gives Adam $1\frac{1}{2}$ feet, Michelle $2\frac{3}{4}$ feet and Kim $1\frac{5}{6}$ feet. How much licorice does Sarah have left over for herself?

$$8 - 6\frac{1}{12}$$

$$7\frac{12}{12} - 6\frac{1}{12} =$$

$1\frac{11}{12}$ ft left for Sarah

$$1\frac{1}{2} + 2\frac{3}{4} + 1\frac{5}{6}$$

$$1\frac{6}{12} + 2\frac{9}{12} + 1\frac{10}{12} = 4\frac{25}{12} = 6\frac{1}{12}$$

How much she gave away

19. How many $\frac{2}{3}$ -ounce packages of peanuts can be made with 8 ounces of peanuts?

$$8 \div \frac{2}{3}$$

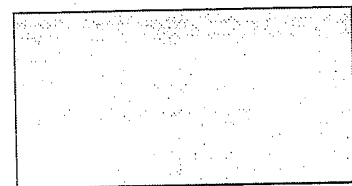
$$\frac{8}{1} \times \frac{3}{2} = \frac{24}{2} =$$

12 $\frac{2}{3}$ ounce packages

20. Find the area of the rectangle (Area = Length x Width):

$$10\frac{1}{6} \times 5\frac{1}{3}$$

$$3\frac{61}{6} \times \frac{168}{3} = \frac{488}{9} = 54\frac{2}{9} \text{ in}^2$$



$10\frac{1}{6}$ in.

$5\frac{1}{3}$ in.

$$\begin{array}{r} 54 \\ 9 \overline{)488} \\ \underline{45} \\ 38 \\ \underline{36} \\ 28 \\ \underline{27} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \\ \underline{9} \\ 10 \end{array}$$