

10-11-18

Aim: SWBAT apply their knowledge of rational numbers to real world applications.

HW: Finish Packet Pages 18 - 19

Test Wednesday

Do Now: Quick Quiz

HOMEWORK

Find the answers using a scientific calculator. Write answers as an improper fraction AND as a mixed number where applicable.

1. $\frac{4}{5} + \left(-\frac{7}{5}\right) = a$ $-\frac{3}{5}$ 2. $-\frac{5}{4} + \left(-\frac{7}{4}\right) = m$ -3 3. $-\frac{5}{8} + \frac{1}{6} = b$ $-\frac{11}{24}$
4. $y = -\frac{1}{2} + \left(-\frac{3}{4}\right)$ $-\frac{1}{4}$ OR $-\frac{5}{4}$ 5. $z = 4\frac{1}{2} + -3\frac{2}{3}$ $\frac{5}{6}$ 6. $b = -5\frac{2}{3} + \left(-8\frac{1}{2}\right)$ $-14\frac{1}{6}$ OR $-\frac{85}{6}$
7. $-10 + 7\frac{1}{3} = y$ $-2\frac{2}{3}$ OR $-\frac{8}{3}$ 8. $-1\frac{2}{7} + \left(-5\frac{3}{14}\right) = p$ $-6\frac{1}{2}$ OR $-\frac{13}{2}$ 9. $9\frac{5}{6} + \left(-8\frac{3}{4}\right) = m$ $1\frac{1}{2}$ OR $\frac{13}{12}$
10. $x = -\frac{5}{8} + \frac{7}{24}$ $-\frac{1}{3}$ 11. $-6\frac{1}{2} + \left(-4\frac{2}{3}\right) = h$ $-11\frac{1}{6}$ OR $-\frac{67}{6}$ 12. $-1\frac{3}{11} + \left(-5\frac{4}{5}\right) = z$ $-7\frac{4}{55}$ OR $-\frac{389}{55}$
13. $-16\frac{3}{4} + 8\frac{4}{5} = b$ $-7\frac{19}{20}$ OR $-\frac{151}{20}$ 14. $-5\frac{2}{3} + \left(-1\frac{1}{9}\right) = r$ $-6\frac{7}{9}$ OR $-\frac{61}{9}$ 15. $8\frac{7}{9} + 6\frac{1}{5} = a$ $14\frac{44}{45}$ OR $\frac{674}{45}$
16. $-21\frac{4}{7} + 8\frac{11}{21} = m$ $-13\frac{1}{21}$ OR $-\frac{274}{21}$ 17. $52\frac{12}{17} + \left(-15\frac{8}{34}\right) = d$ $37\frac{8}{17}$ OR $\frac{637}{17}$ 18. $-4\frac{3}{4} + 6\frac{5}{8} + \left(-4\frac{1}{16}\right) = k$ $-2\frac{7}{16}$ OR $-\frac{35}{16}$

State the property shown.

19. $3\frac{1}{4} + \left(-3\frac{1}{4}\right) = 0$ 20. $\left(-\frac{1}{2} + \frac{3}{4}\right) + \frac{5}{6} = -\frac{1}{2} + \left(\frac{3}{4} + \frac{5}{6}\right)$
21. $-\frac{5}{7} + \frac{1}{3}$ is rational 22. $8\frac{2}{3} + 0 = 8\frac{2}{3}$
23. $\frac{3}{4} + \left(-\frac{5}{7}\right) = -\frac{5}{7} + \frac{3}{4}$

Solve each of the following. Write your answers in simplest form.

24. $5 - 2\frac{1}{3} = p$ $2\frac{2}{3}$ OR $\frac{8}{3}$ 25. $-5\frac{2}{3} - 8 = d$ $-13\frac{2}{3}$ OR $-\frac{41}{3}$ 26. $-9\frac{1}{3} - \left(6\frac{2}{3}\right) = b$ -16
27. $-11\frac{1}{2} - \left(-16\frac{1}{2}\right) = c$ 5 28. $t = -4\frac{1}{5} - \left(-3\frac{7}{10}\right)$ $-\frac{1}{2}$ 29. $r = 8\frac{2}{5} - 3\frac{1}{2}$ $4\frac{9}{10}$ OR $\frac{49}{10}$
30. $x = 7\frac{1}{5} - \left(-3\frac{3}{4}\right)$ $10\frac{19}{20}$ OR $\frac{219}{20}$ 31. $3\frac{1}{7} - 8\frac{5}{6} = h$ $-5\frac{29}{42}$ OR $-\frac{239}{42}$ 32. $-12\frac{5}{8} - \left(-3\frac{1}{4}\right) = k$ $-9\frac{3}{8}$ OR $-\frac{75}{8}$

HOMWORK

Evaluate. Express the answer in simplest form.

<p>1</p> <p>A</p> $\frac{12}{20} \cdot \frac{5}{6} = \frac{1}{2}$ <p>2 4</p>	<p>B</p> $\frac{6}{7} \div \frac{1}{3} = \frac{18}{7}$ $\frac{6}{7} \cdot \frac{3}{1}$	<p>C</p> $\frac{-12}{25} \cdot \frac{5}{8} = \frac{-3}{10}$ <p>5</p>	<p>D</p> $\frac{-12}{60} \cdot \frac{2}{10} = \frac{-1}{25}$ <p>3 8 5</p>
<p>2</p> $-1\frac{1}{8} \cdot 2\frac{2}{3} = -3$ <p>3 8 3</p>	$-1\frac{5}{6} \cdot -1\frac{5}{11} =$ $\frac{-11}{6} \cdot \frac{-168}{11}$ <p>3 6 11</p>	$\frac{100}{900} \cdot \frac{8}{9} = \frac{800}{81}$	$\frac{-2}{5} \div \frac{2}{7} = \frac{-7}{5}$ $\frac{-2}{5} \cdot \frac{7}{2}$
<p>3</p> $-1\frac{1}{2} \div 2\frac{1}{3} = \frac{-9}{14}$ $\frac{-3}{2} \div \frac{7}{3}$ $\frac{-3}{2} \cdot \frac{3}{7}$ $\frac{-9}{14}$	$-\frac{4}{5} \div \frac{7}{10} = \frac{-8}{7}$ $\frac{-4}{5} \cdot \frac{10}{7}$	$-1\frac{3}{4} \div 2\frac{1}{3} = \frac{-3}{4}$ $\frac{-7}{4} \div \frac{7}{3}$ $\frac{-7}{4} \cdot \frac{3}{7}$ $\frac{-3}{4}$	$\frac{-2}{5} \div -5 = \frac{2}{25}$ $\frac{-2}{5} \cdot \frac{-1}{5}$
<p>4</p> $4\frac{1}{2} \cdot -4\frac{1}{3} \cdot \frac{5}{6} = \frac{-195}{4}$ <p>3 2 1 6 2</p>	<p>What is the product of $\frac{12}{20}$ and $\frac{5}{6}$?</p> $\frac{12}{20} \cdot \frac{5}{6} = \frac{1}{2}$ <p>2 4 20 6 1</p>		
<p>5</p> $\frac{4}{5} \cdot 4\frac{3}{8} \div \frac{6}{12} = 7$ $\frac{4}{5} \cdot \frac{35}{8} \cdot \frac{6}{12}$ $\frac{4}{8} \cdot \frac{35}{8} \cdot \frac{12}{6} = \frac{7}{1} = 7$ <p>1 4 35 7 12 6</p>			

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CLASSWORK/HOMEWORK

Write a numerical expression and evaluate. *NO equal sign*

- 1) Joe's apple weighs $\frac{4}{5}$ lb. Marta's apple weighs $\frac{3}{5}$ lb. How much more does Joe's apple weigh than Marta's?

$$\frac{4}{5} - \frac{3}{5} = \frac{1}{5}$$

Joe's apple weighs $\frac{1}{5}$ lb more than Marta's apple.

- 2) At 2:30 A.M. the temperature in Alaska is -5°F . Over the next hour the temperature drops $1\frac{3}{4}$ of a degree. What is the temperature at 3:30 A.M.?

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

The temp. is $-6\frac{3}{4}$ degrees.

- 3) The depth of a small submarine changes by $-\frac{3}{8}$ mile after each exploration. After how many explorations will the submarine's depth have changed by $-1\frac{1}{2}$ miles?

- 4) The amount of shore at a local beach changes an average of $-\frac{3}{4}$ foot each year. What is the change in the amount of shore after $7\frac{3}{4}$ years?

$$\frac{-3}{4} \cdot 7\frac{3}{4} = \frac{-3}{4} \cdot \frac{31}{4} = \frac{-93}{16}$$

$$\begin{array}{r} 5\frac{13}{16} \\ 16 \overline{)93} \\ \underline{-80} \\ 13 \end{array}$$

The shore eroded $5\frac{13}{16}$ feet.

5) Mitch is cutting a piece of fabric that is $4\frac{4}{5}$ feet long into smaller strips that are $\frac{4}{5}$ feet long. How many strips will Mitch have when he is done?

6) At midnight, the temperature in Alto is $-3\frac{4}{5}$ °F. The wind chill makes the temperature feel $5\frac{3}{5}$ °F colder than the actual temperature. What is the wind chill temperature?

7) Beth plays a video game in which she starts with 0 points. In round 1, she loses $3\frac{1}{2}$ points; in round 2, she wins $28\frac{1}{2}$ points; and in round 3, she loses another $3\frac{1}{5}$ points. What is her final score?