

Test 2 Review: Fraction and Decimal Operations

Math 6 Pre-AP (2016)

1. What is the product of $7\frac{2}{5} \times \frac{5}{8}$?

$$7\frac{2}{5} \cdot \frac{5}{8}$$

$$\frac{37}{5} \cdot \frac{5}{8} = \frac{37}{8} = 4\frac{5}{8}$$

$4\frac{5}{8}$

2. What is the value of $2\frac{3}{4} \div \frac{3}{8}$?

$$2\frac{3}{4} \div \frac{3}{8}$$

$$\frac{11}{4} \div \frac{3}{8} = \frac{11}{4} \cdot \frac{8}{3} = \frac{22}{3} = 7\frac{1}{3}$$

$7\frac{1}{3}$

3. What is the reciprocal of $3\frac{1}{5}$?

$$3\frac{1}{5} = \frac{16}{5}$$

$\frac{5}{16}$

4. Dillon divided a $3\frac{1}{3}$ pound bag of pears among his five friends. How many pounds of pears did each friend receive?

$$3\frac{1}{3} \div 5$$

$$\frac{10}{3} \div \frac{5}{1} = \frac{2}{3}$$

$\frac{2}{3}$ pounds

5. Li cut a 6-inch piece of string into pieces that are each $\frac{9}{16}$ of an inch long. How many pieces of string did she cut?

$$6 \div \frac{9}{16}$$

$$\frac{6}{1} \cdot \frac{16}{9} = \frac{32}{3} = 10\frac{2}{3}$$

$10\frac{2}{3}$ pieces

6. Cora put 16 cups of flour into bags that hold $3\frac{1}{2}$ cup each. How many bags did she fill?

$$16 \div 3\frac{1}{2}$$

$$\frac{16}{1} \cdot \frac{2}{7} = \frac{32}{7} = 4\frac{4}{7}$$

$4\frac{4}{7}$ bags

7. Kathy claims that dividing by $\frac{1}{5}$ is the same thing as multiplying by 5. Is she correct? Explain why or why not.

Yes, because 5 or $\frac{5}{1}$ is the reciprocal of $\frac{1}{5}$.
Dividing by a # is the same as multiplying by the reciprocal.

8. Of the animals at the shelter, $\frac{5}{8}$ are cats. Of the cats, $\frac{2}{3}$ are kittens. What fraction of the animals at the shelter are kittens?

$$\frac{5}{8} \cdot \frac{2}{3} = \frac{10}{24} = \frac{5}{12}$$

$\frac{5}{12}$

9. Order from least to greatest.

$$\frac{7}{3}, 0.25, 1.4, \frac{1}{5}$$

$$\frac{7}{3} = 2\frac{1}{3} = 2.\bar{3}$$

$$\frac{1}{5} = \frac{2}{10} = 0.2$$

~~0.2, 0.25, 1.4, 2.3~~

$$\frac{1}{5}, 0.25, 1.4, \frac{7}{3}$$

10. Michael says that all rational numbers are integers. Stephanie disagrees and says that all integers can be written as fractions, which makes them rational numbers. Who is correct?

Stephanie is correct. Integers are always rational #s, but rational #s are not always integers. (ie $-3.4, 2.6, \rightarrow$ rat # not int

11. Tadpoles swim at a depth of -0.58 inches, goldfish swim at -0.513 inches, crawfish roam at -0.47 inches, and minnows swim at -0.492 inches. Put them in order from shallowest to deepest.

$$\text{Tad} = -0.58$$

$$\text{GF} = -0.513$$

$$\text{CF} = -0.47$$

$$\text{Min} = -0.492$$

Crawfish, Minnows, goldfish, tadpoles

12. What is 3.5 divided by 0.7?

$$\begin{array}{r} 0.5 \\ 0.7 \overline{) 3.5} \\ \underline{3.5} \\ 0 \end{array}$$

(5)

13. David drives 40 miles in one hour. How many miles does he drive in 1.5 hours?

$$\begin{array}{r} 2 \\ 1.5 \\ \times 40 \\ \hline 600 \end{array}$$

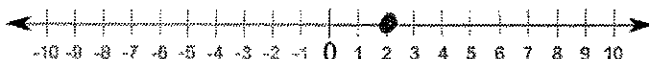
60 miles

$$\begin{array}{r} 1.5 \\ 40 \\ \hline 60.0 \end{array}$$

14. Find the product of $2\frac{2}{3}$ and $\frac{3}{4}$. Graph on the number line below.

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

$$2\frac{8}{3} \cdot \frac{3}{4} = \frac{2}{1}$$



15. How is $\frac{3}{4} \div \frac{5}{8}$ related to $\frac{3}{4} \times \frac{8}{5}$?

same problem. second one is multiplying by the reciprocal.

16. Bill bought 5 bags of candy for 24 children. What rational number will show how much of a bag each child will receive?

$$\frac{5}{24}$$

17. Tim went to Grimaldi's and bought a pizza and a drink. The bill was \$24.59. If he paid with a fifty dollar bill, how much change did he receive?

$$\begin{array}{r} 45.00 \\ - 24.59 \\ \hline 20.41 \end{array}$$

(\$20.41)

24. Alvin's family used 20.5 gallons of gas to drive 492 miles. How many miles did they drive on each gallon of gas?

$$\begin{array}{r} 24 \\ 20.5 \overline{) 492.0} \\ \underline{410} \\ 820 \\ \underline{-820} \\ 0 \end{array}$$

24mpg

$$\begin{array}{r} 2 \\ 205 \\ \underline{4} \\ 820 \end{array}$$

25. Talia measured a piece of construction paper to be 6.1 inches wide by 8.2 inches long. What is the area of the piece of construction paper in square inches?

$$\begin{array}{r} 6.1 \\ \times 8.2 \\ \hline 122 \\ 4880 \\ \hline 50.02 \end{array}$$

50.02

26. Billy drove $\frac{1}{2}$ of the 7.5 miles between his house and the mall. How many miles did he drive?

$$\frac{1}{2} \cdot 7.5$$

$$\frac{1}{2} \cdot \frac{15}{2} = \frac{15}{4} = 3\frac{3}{4}$$

$$\frac{1}{2} \cdot 7.5$$

$$\frac{1}{2} \cdot 7\frac{1}{2}$$

$$.5 \cdot 7.5$$

$$\begin{array}{r} 2 \\ 7.5 \\ \underline{.5} \\ 32.5 \end{array}$$

3.75

27. Bria drank $\frac{3}{4}$ of a 16.4-ounce container of water. How many ounces of water did Bria drink?

$$\frac{3}{4} \cdot 16.4$$

$$\frac{3}{4} \cdot \frac{41}{5} = \frac{123}{10} = 12\frac{3}{10}$$

$$\frac{3}{4} \cdot 16.4$$

$$\frac{3}{4} \cdot 16\frac{4}{10}$$

$$\frac{3}{4} \cdot 16\frac{2}{5}$$

12.3

$$\begin{array}{r} 48.22 \\ 16.4 - 1 \\ \hline 11.7 \times 2 > 3 \\ \underline{1820} \\ 11480 \\ \hline 12300 \end{array}$$

28. What is $\frac{4}{5}$ of 20.5?

$$\frac{4}{5} \cdot 20.5$$

$$\frac{4}{5} \cdot 20.5$$

$$\begin{array}{r} 4 \\ 20.5 - 1 \\ \underline{.8} - 1 > 2 \\ 16.4 \end{array}$$

$$\frac{4}{5} \cdot 20\frac{1}{2}$$

$$\frac{8}{10} \cdot 20.5$$

$$0.8 \cdot 20.5$$

$$\underline{16.40}$$

$$\frac{24}{5} \cdot \frac{41}{2} = \frac{82}{5} = 16\frac{2}{5}$$

16.4

