

Math 6 – Unit 1: Number System Fluency Review

Complete the following problems to review this unit. You must show all work to receive credit!

- 1) Explain what it means if you are asked to solve the problem $\frac{3}{5} \div \frac{1}{5}$. You may use any method, but explain clearly!

This problem is finding how many groups of $\frac{1}{5}$ can fit inside $\frac{3}{5}$.

- 2) Find the greatest common factor of 30 and 48.

$$\begin{array}{r} 2 \overline{) 30} \quad 48 \\ 3 \overline{) 15} \quad 24 \\ \hline 5 \quad 8 \\ 2 \times 3 = \boxed{6} \end{array}$$

OR

$$30: 1, 2, 3, 5, \boxed{6}, 10, 15, 30$$

$$48: 1, 2, 3, 4, \boxed{6}, 8, 12, 16, 24, 48$$

- 3) Find the least common multiple of 10 and 6.

$$\begin{array}{r} 2 \overline{) 10} \quad 6 \\ 5 \quad 3 \\ \hline 2 \cdot 5 \cdot 3 = \boxed{30} \end{array}$$

OR

$$10: 10, 20, \boxed{30}, 40, 50, \dots$$

$$6: 6, 12, 18, 24, \boxed{30}, \dots$$

4) $3 \overline{) 9,537}$

$$\begin{array}{r} 3,179 \\ -9 \\ \hline 05 \\ -05 \\ \hline 03 \\ -03 \\ \hline 23 \\ -21 \\ \hline 27 \\ -27 \\ \hline 0 \end{array}$$

5) $13.12 + 6 + 7.1$

Line up the decimals!
The "6" is the same as "6.0"

$$\begin{array}{r} 13.12 \\ + 6.00 \\ + 7.10 \\ \hline \boxed{26.22} \end{array}$$

6) $(1.25)(2.3) =$

$$\begin{array}{r} 125 \\ \times 23 \\ \hline 375 \\ + 2500 \\ \hline \boxed{2875} \end{array}$$

7) $\frac{5}{7} \div 10 =$

$$\frac{5}{7} \div 10$$

$$\frac{5}{7} \cdot \frac{1}{10} = \frac{5 \div 5}{70 \div 5} = \boxed{\frac{1}{14}}$$

8) $72 - 1.68 =$

$$\begin{array}{r} 72.00 \\ - 1.68 \\ \hline \boxed{70.32} \end{array}$$

9) $5\frac{1}{2} \div 2\frac{1}{2} =$

$$\frac{11}{2} \div \frac{5}{2}$$

$$\frac{11}{2} \cdot \frac{2}{5} = \frac{22}{10} = \frac{11}{5} = \boxed{2\frac{1}{5}}$$

- 10) Talia waters her plants every 4 days. She trims them every 10 days. She did both today. In how many days will she do both again?

Waters: 4, 8, 12, 16, $\boxed{20}, \dots$

Trims: 10, $\boxed{20}$

- 11) A quarterback practiced for $28\frac{1}{2}$ hours in 4 weeks. How many hours did he practice per week?

$$28\frac{1}{2} \div 4$$

$$\frac{57}{2} \div \frac{4}{1}$$

$$\frac{57}{2} \cdot \frac{1}{4} = \frac{57}{8} = \boxed{7\frac{1}{8}}$$

12) Sarah paid \$4.80 for 1.2 pounds of sunflower seeds. What is the cost for one pound of sunflower seeds?

$$1.2 \overline{) 4.80} \rightarrow 12 \overline{) 48} \quad \$4$$

$$\begin{array}{r} 4 \\ 12 \overline{) 48} \\ \underline{-48} \\ 0 \end{array}$$

13) Hot dogs are sold in packages of 8 and hot dog buns are sold in packages of 10. What is the least number of packages of each that can be bought to make hot dogs (one hot dog and one bun) with no hot dogs or buns left over?

total number of hot dogs 40

packs of hot dogs 5 ($5 \times 8 = 40$)

packs of buns 4 ($4 \times 10 = 40$)

$$\begin{array}{r} 2 \overline{) 8} \quad 10 \\ \underline{4} \quad 5 \\ 4 \quad 5 \end{array}$$

LCM = $2 \cdot 4 \cdot 5 = 40$

14) A group of friends has ordered 3 pizzas to share. If each person gets $\frac{1}{4}$ of a pizza, and there is no pizza left over, how many friends split the pizza?

$$3 \div \frac{1}{4}$$

$$\frac{3}{1} \div \frac{1}{4}$$

$$\frac{3}{1} \times \frac{4}{1} = \frac{12}{1} = 12$$

OR

15) Emma has \$3 to buy school supplies. She buys 3 folders that are \$0.55 each. She wants to spend the remaining money on pencils that are \$0.05 each. How many pencils can she purchase?

$$\begin{array}{r} 0.55 \\ \times 3 \\ \hline 1.65 \end{array}$$

3 folders cost \$1.65

$$\begin{array}{r} 2.90 \\ \underline{-1.65} \\ 1.25 \end{array}$$

She has \$1.25 left.

$$\begin{array}{r} 0.05 \overline{) 1.25} \\ \underline{1.25} \\ 0 \end{array}$$

She can buy 25 pencils.

16) Chesney is cutting a roll of cookie dough into pieces that are $\frac{1}{3}$ inch thick, if the roll of cookie dough is $\frac{4}{6}$ inches long, which model best represents the situation?

