8, 3, 7, 1, 10, 13, 2, 9, 4, 11, 6, 12, 5

Fractions/Decimals EOU Study Guide **Name:** Key **Period:** ____

Decimal & Fractions Operations

1.) $15\frac{8}{10} + 7\frac{2}{3}$

$15\frac{24}{30} + 7\frac{20}{30} =$

$22\frac{44}{30} = 23\frac{14 \div 2}{30 \div 2} = 23\frac{7}{15}$

2.) $3\frac{1}{4} - 1\frac{9}{12}$ (×3)

$3\frac{3}{12} - 1\frac{9}{12}$

$2\frac{15}{12} - 1\frac{9}{12} =$

$1\frac{6}{12} = 1\frac{1}{2}$

3.) $5\frac{1}{3} \cdot 4$

$\frac{16}{3} \cdot \frac{4}{1} = \frac{64}{3} = 21\frac{1}{3}$

4.) $2\frac{3}{4} \cdot 3\frac{1}{3}$

$\frac{11}{4} \cdot \frac{10}{3} = \frac{110}{12} = 9\frac{2}{12} = 9\frac{1}{6}$

5.) $7{,}434.44 + 98.6$

98.60

7533.04

6.) $9.7 - 5.453$

5.453

4.247

7.) 2.5×2.5

25

25

125

500

6.25

8.) $1.68 \div 2.4$

0.7

$24 \overline{)16.8}$

-168

0

$24 \times 7 = 168$

9.) Joanna needs several pieces of pipe that are $1\frac{1}{8}$ inches long. She has a pipe that is $11\frac{1}{2}$ inches long. How many $1\frac{1}{8}$ inch pieces can she cut from the $11\frac{1}{2}$ long pipe?

$11\frac{1}{2} \div 1\frac{1}{8}$

$\frac{23}{2} \div \frac{9}{8} \rightarrow \frac{23}{2} \cdot \frac{8}{9} = \frac{184}{18} = 10\frac{4}{18}$ or about 10 pieces

10.) You are stacking books in a box that is 12 inches high. Each book is 1 ¼ inches thick. How many books can you fit in each box in a single stack?

$12 \div 1\frac{1}{4}$

$\frac{12}{1} \div \frac{5}{4} \rightarrow \frac{12}{1} \cdot \frac{4}{5} = \frac{48}{5} = 9\frac{3}{5}$ about 9 books

11.) Marie had $10\frac{1}{2}$ feet of ribbon to make bows. Each bow required $\frac{3}{4}$ foot of ribbon. How many bows could she make with the ribbon?

$10\frac{1}{2} \div \frac{3}{4}$

$\frac{21}{2} \cdot \frac{4}{3} = \frac{84}{6} = 14$

12.) Andy needs to solve $\frac{3}{5} \div \frac{3}{8}$. In order to do this, he multiplies $\frac{3}{5} \times \frac{8}{3}$. Will Andy's method work?

Yes, because $\frac{3}{8}$ and $\frac{8}{3}$ are equivalent.

No, because $\frac{3}{5}$ and $\frac{8}{3}$ are not equivalent.

★ Yes, because dividing by a fraction is the same as multiplying by the reciprocal of the fraction.

No, because one strategy involves division and the other involves multiplication.

13.) Jennifer has a small baking pan shaped like a rectangular prism. She lines the bottom of her pan with aluminum foil. The area of the rectangular piece of foil is $11\frac{1}{4}$ square inches. Its length is $4\frac{1}{2}$ inches. What is the <u>width</u> of the foil? Explain or show your reasoning. (*Area = Length x width*)

$11\frac{1}{4} \div 4\frac{1}{2}$

$\frac{45}{4} \div \frac{9}{2} \rightarrow \frac{45}{4} \cdot \frac{2}{9} = \frac{90}{36} = 2\frac{18}{36} = 2\frac{1}{2}$