Agilemind Topic 5/6 Study Guide

Name: Key Period: ____

Decimal Operations (FA5-Obj1)

Remember: Add/Sub- Line up decimal point, Multiply- Add decimal in product, Divide- Bring decimal straight up after turning divisor into whole number.

Example: $\begin{array}{r} 14.^{1}\cancel{0}^{10} \\ -\ 3.08 \\ \hline 11.02 \end{array}$ $\begin{array}{r} 6.2 \\ \times\ 4 \\ \hline 24.8 \end{array}$ $0.2\overset{\curvearrowright}{)}1.\overset{\curvearrowright}{1}2 = 2)\overline{11.2}$ $\begin{array}{r} 05.6 \\ -10\downarrow \\ \hline -12 \\ \hline 0 \end{array}$

1.) 15.678 + 242.3

257.978

2.) 155 - 32.34

122.66

3.) Bill bought a box of cereal for $3.25, a mega candy bar for $1.79, spaghetti sauce for $4.83, and a package of meat for $5.17. He also bought two packages of cookies for $3.41 each. He spent $ 21.86 total for all the items. He received $3.14 in change. If all items are non-tax items, Bill started with $ 25.00.

$\begin{array}{r} 3.25 \\ 1.79 \\ 4.83 \\ +\ 5.17 \\ \hline 15.04 \end{array}$ $\begin{array}{r} 3.41 \\ +3.41 \\ \hline 6.82 \end{array}$ $\begin{array}{r} 15.04 \\ +\ 6.82 \\ \hline 21.86 \end{array}$

4.) 2.56 x 15.4

39.424

5.) 21.5 x 112.7

2423.05

6.) 66.12 ÷ 1.2

55.1

7.) A group of friends share a container of popcorn at the movies. It costs $3.15 to buy the popcorn, and $0.85 for each refill. If they spend $7.40, how many times did the group of friends refill their popcorn?

7.40 - 3.15 = 4.25 4.25 ÷ 0.85 = 5 refills

Dividing Fractions (FA5-Obj2)

*Remember: Add/Sub- Find common denominator, Multiply- Turn to improper, then Multiply straight across, Divide- Turn to improper, then Keep Change Flip. ***All fractions must be simplified!!*

Example: $13 - 4\frac{4}{5} \rightarrow 12\frac{5}{5} - 4\frac{4}{5} = 8\frac{1}{5}$ * borrowing from whole #

$2\frac{1}{2} \div 4 \rightarrow \frac{5}{2} \div \frac{4}{1} \rightarrow \frac{5}{2} \cdot \frac{1}{4} = \frac{5}{8}$ improper KCF multiply

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

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

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

9.) $9 - 6\frac{4}{5}$

$8\frac{5}{5} - 6\frac{4}{5}$

$2\frac{1}{5}$

10.) $3\frac{1}{4} \cdot \frac{3}{3} - 1\frac{9}{12}$

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

$2\frac{15}{12} - 1\frac{9}{12} = 1\frac{6}{12} = 1\frac{1}{2}$

11.) $5\frac{1}{3} \cdot 4$

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

12.) $2\frac{3}{4} \cdot 3\frac{1}{3}$

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

13.) Erin is running a marathon. At the 18 mile mark she has been running for $2\frac{2}{3}$ hours. How fast is she running in miles per hour?

A. 9 miles per hour

B. $6\frac{3}{4}$ miles per hour

C. 48 miles per hour

D. 6 miles per hour

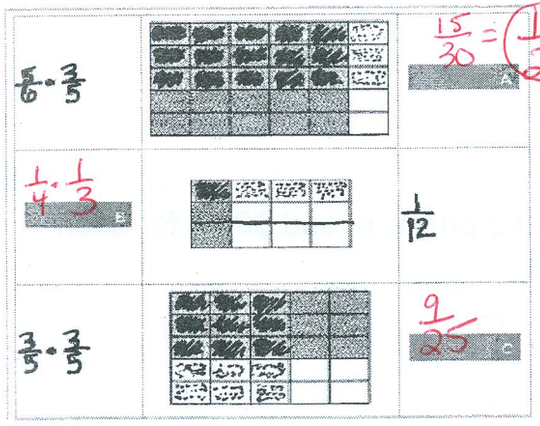
$18 \div 2\frac{2}{3} = \frac{18}{1} \div \frac{8}{3}$

$\frac{18}{1} \cdot \frac{3}{8} = \frac{54}{8} =$

14.) 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?

$11\frac{1}{2} \div 1\frac{1}{8} \rightarrow \frac{23}{2} \div \frac{9}{8} \rightarrow \frac{23}{2} \cdot \frac{8}{9} = \frac{184}{18} = 10\frac{4}{18} = 10\frac{2}{9}$ so about 10 pieces

15.) Fill in the blanks to match the area model to its problem or answer. The black shaded region represents the product.



Answer Key

Tile1 $\frac{6}{10}$

Tile2 $\frac{1}{4} \cdot \frac{1}{3}$

Tile3 $\frac{1}{2}$

Tile4 $\frac{1}{4} \cdot \frac{2}{5}$

Tile5 $\frac{3}{30}$

Tile6 $\frac{9}{25}$