Math 085 - Test 4a

November 14, 2013

Name key

Score _____

Part I - Circle the best answer for each problem. Each problem is worth 2 points. Partial credit may be awarded for correct work or explanations. CALCULATORS ARE ALLOWED ON THIS PORTION OF THE TEST ONLY.

1. Compute $3.87 + 5.23 \times (-2.97)$.

   (a) -11.6631
   (b) -27.027
   (c) 27.027
   (d) 19.4031

2. Write $\frac{1572}{18}$ as a mixed number in lowest terms.

   (a) $87\frac{3}{18}$ (b) $86\frac{24}{18}$ (c) $80\frac{6}{18}$ (d) $87\frac{1}{3}$

   $18\overline{)1572}$ → 87, 144, 132, 126, 6 → $87\frac{6}{18} = 87\frac{1}{3}$

3. A rectangular garden has dimensions $3\frac{7}{8}$ meters by $2\frac{3}{4}$ meters. Find the area of the garden. Write your answer as a mixed number in lowest terms.

   (a) $6\frac{5}{8}\,\text{m}^2$ (b) $10\frac{21}{32}\,\text{m}^2$ (c) $12\,\text{m}^2$ (d) $\frac{53}{8}\,\text{m}^2$

   $3\frac{7}{8} \times 2\frac{3}{4} = \frac{341}{32} = 10\frac{21}{32}$

4. Combine like terms: $3.89x - 9.773y + 2.951x + 6.9y$

   (a) $6.841x - 2.873y$
   (b) $6.841x + 16.67y$
   (c) $0.939x - 16.67y$
   (d) $2.873x + 6.841y$

   $3.89 + 2.951 = 6.841$

   $6.9 - 9.773 = -2.873$

5. Compute $-\frac{14}{72} + \frac{82}{91}$. Write your answer in lowest terms.

   (a) $\frac{3589}{3276}$ (b) $\frac{2315}{3276}$ (c) $\frac{68}{163}$ (d) $\frac{96}{163}$

Math 085 - Test 4b

November 14, 2013

Name key

Score _____

Part II - Circle the best answer for each problem. Each problem is worth 2 points. Partial credit may be awarded for correct work or explanations. CALCULATORS ARE NOT ALLOWED ON THIS PORTION OF THE TEST.

1. Find the least common multiple of 8, 16, and 12.

   (a) 4
   (b) 48
   (c) 1536
   (d) 32

   → 16, 32, 48 ↑ Yes!

2. Add and write your result as an improper fraction in lowest terms: $\frac{5}{8} + 2$

   (a) $\frac{7}{9}$
   (b) $\frac{21}{8}$
   (c) $\frac{5}{4}$
   (d) $\frac{7}{8}$

   $2\frac{5}{8} = \frac{21}{8}$

3. Solve for x: $x + \frac{1}{4} = \frac{3}{5}$

   (a) $x = \frac{17}{20}$
   (b) $x = \frac{3}{20}$
   (c) $x = 2$
   (d) $x = \frac{7}{20}$

   $X = \frac{3}{5} - \frac{1}{4} = \frac{12}{20} - \frac{5}{20} = \frac{7}{20}$

4. Solve for w: $\frac{3}{4}w - \frac{1}{8} = \frac{1}{2}$

   (a) $w = \frac{5}{6}$
   (b) $w = \frac{4}{15}$
   (c) $w = 6$
   (d) $w = -\frac{1}{8}$

   $\frac{3}{4}w = \frac{1}{2} + \frac{1}{8} = \frac{4}{8} + \frac{1}{8} = \frac{5}{8}$

   $\frac{3}{4}w = \frac{5}{8}$

   $w = \frac{5}{8_2}\left(\frac{4}{3}^{1}\right) = \frac{5}{6}$

5. Convert $-12\frac{3}{4}$ to an improper fraction.

(a) $-\frac{51}{4}$

(b) $-\frac{45}{4}$

(c) $-\frac{15}{4}$

(d) $-\frac{36}{4}$

$12\frac{3}{4} = \frac{48+3}{4} = \frac{51}{4}$

6. Add and write your result as a mixed number in lowest terms: $5\frac{2}{3} + 3\frac{5}{6}$

(a) $8\frac{3}{6}$

(b) $9\frac{1}{6}$

(c) $9\frac{1}{2}$

(d) $\frac{56}{6}$

$$\begin{array}{r} 5\frac{4}{6} \\ +\ 3\frac{5}{6} \\ \hline 8\frac{9}{6} \end{array} = 9\frac{3}{6} = 9\frac{1}{2}$$

7. Subtract and write your result as a mixed number in lowest terms: $13 - 9\frac{3}{8}$

(a) $4\frac{5}{8}$

(b) $3\frac{5}{8}$

(c) $-4\frac{3}{8}$

(d) $4\frac{3}{8}$

$$\begin{array}{r} 12\frac{8}{8} \\ -\ 9\frac{3}{8} \\ \hline 3\frac{5}{8} \end{array}$$

8. A recipe calls for $1\frac{2}{3}$ cups of sugar. How much sugar is required for $\frac{3}{4}$ of the recipe?

(a) $\frac{5}{4}$ cups

(b) $\frac{9}{20}$ cups

(c) $\frac{29}{12}$ cups

(d) 2 cups

$\frac{3}{4} \times \frac{5}{3} = \frac{5}{4}$

9. Which one of these is the correct word name for 52.7?

(a) Fifty-two point seven

(b) Fifty-two and seven hundredths

(c) Fifty-two point seven tenths

(d) Fifty-two and seven tenths

10. Which one of these improper fractions is equivalent to 45.009?

(a) $\frac{459}{10000}$

(b) $\frac{45.009}{10}$

(c) $\frac{45009}{1000}$

(d) $\frac{459}{10}$

$45\frac{9}{1000} = \frac{45009}{1000}$

11. Which one of these numbers is greater than -0.5647?

(a) -1.0

(b) -0.565

(c) -0.5648

(d) -0.56

12. Multiply: 9.876×0.001

(a) 9876

(b) 0.09876

(c) 987.6

(d) 0.009876

MOVE DECIMAL PT LEFT 3 PLACES.

13. Round 89.5428 to the nearest hundredth.

(a) 90
(b) 100
(c) 89.54
(d) 89.543

14. Which of the following is a reasonable estimate for $9\frac{1}{4} - 17\frac{1}{9}$?

(a) -8
(b) 26
(c) -7
(d) 8

$\approx 9 - 17 = -8$

15. Multiply: 13.9008×1000

(a) 0.0139008
(b) 1,390.08
(c) 13,900.8
(d) 0.139008

MOVE DECIMAL PT 3 PLACES RIGHT

16. John hiked $\frac{3}{5}$ mi, took a 5-min break, and then hiked another $\frac{3}{8}$ mi. How far did John hike in all?

(a) $\frac{6}{13}$ mi
(b) $\frac{39}{40}$ mi
(c) $\frac{3}{7}$ mi
(d) $1\frac{1}{8}$ mi

$\frac{3}{5} + \frac{3}{8}$

$= \frac{24}{40} + \frac{15}{40} = \frac{39}{40}$

17. Solve for x: $20 = 6 - \frac{2}{3}x$

(a) $x = -21$

(b) $x = -\frac{28}{3}$

(c) $x = 10$

(d) $x = -\frac{20}{6}$

$-\frac{2}{3}x + 6 = 20$

$-\frac{2}{3}x = 14$

$x = \frac{14}{1}\left(-\frac{3}{2}\right) = -21$

18. Write $\frac{46}{4}$ as a mixed number in lowest terms.

(a) $11\frac{1}{4}$

(b) $10\frac{2}{4}$

(c) $11\frac{1}{2}$

(d) $46\frac{1}{4}$

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

19. Divide and write your result as a mixed number in lowest terms: $2\frac{1}{3} \div 1\frac{3}{4}$

(a) $2\frac{1}{4}$

(b) $4\frac{1}{12}$

(c) $\frac{12}{49}$

(d) $1\frac{1}{3}$

$\frac{7}{3} \div \frac{7}{4} = \frac{7}{3} \times \frac{4}{7}$

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

20. Evaluate $x + 2y$ when $x = 5\frac{1}{4}$ and $y = \frac{7}{8}$.

(a) $\frac{15}{8}$

(b) 7

(c) $6\frac{1}{8}$

(d) $\frac{7}{4}$

$5\frac{1}{4} + 2\left(\frac{7}{8}\right)$

$5\frac{1}{4} + \frac{14}{8} = 5\frac{1}{4} + \frac{7}{4}$

$= 5\frac{1}{4} + 1\frac{3}{4} = 6\frac{4}{4}$

$= 7$