

Sample Competency test for Math 210A
All work is to be done on the exam. No calculator.

1. Perform the indicated operation:

$$4000 - 1279$$

2. What is the prime factorization of 182

3. What is the least common multiple of the pair of numbers 42 and 18

Questions 4 – 9: Perform the indicated operation. Answers are to be given in lowest terms.

4. $3\frac{1}{2} \times 2\frac{8}{15}$

5. $\frac{4}{7} + \frac{5}{7} + \frac{6}{6}$

6. $\frac{3}{7} - \frac{1}{3}$

7. $4\frac{7}{8} \div \frac{11}{3}$

8. $12 - 9\frac{3}{7}$

9. $10\frac{1}{3} - 4\frac{5}{6}$

10. Round the number to the place indicated: 4.7961 (hundredths)

Questions 11 – 12: Use the order of operations to simplify each of the following:

11. $7 + 5 \div 5 \times 6$

12. $7.06 + 4.85 - 3.9 \times 2.25$

Questions 13 – 15: Perform the indicated operation.

13. 2.43×0.29

14. $56.014 \div 13.632$

15. $17.6 - 13.632$

16. Change the fraction into an equivalent decimal: $\frac{15}{8}$
17. Change the fraction into an equivalent decimal: $\frac{5}{11}$
18. Write 123% as a decimal
19. Write 60.6% as a fraction or mixed number in lowest terms.
20. A chemical is 42% pure. In 800 grams of the chemical, how much (in grams) of the chemical is pure?

$$\begin{array}{r}
 .45 \\
 \hline
 11 \overline{) 5.000} \\
 \underline{44} \\
 60 \\
 \underline{55} \\
 50
 \end{array}$$

$$\begin{array}{r}
 817 \\
 \hline
 8 \overline{) 7.000} \\
 \underline{64} \\
 60 \\
 \underline{56} \\
 40
 \end{array}$$

16. Change the fraction into an equivalent decimal:

$$\frac{15}{8} = 1\frac{7}{8} = 1.875$$

17. Change the fraction into an equivalent decimal:

$$\frac{5}{11} = .45$$

18. Write 123% as a decimal

$$1.23$$

19. Write 60.6% as a fraction or mixed number in lowest terms.

$$\frac{606}{1000} = \frac{303}{500}$$

20. A chemical is 42% pure. In 800 grams of the chemical, how much (in grams) of the chemical is pure?

336 grams

$$\begin{array}{r}
 800 \\
 \times .42 \\
 \hline
 1600 \\
 3200 \\
 \hline
 336.00
 \end{array}$$