This is a copy of the practice exam that is found online at www.byui.edu, students, Academics, Math exams. It is a paper-saving version (only 3 pages). I recommend you use it as a study sheet before you go into the testing center to take the actual exam.

Math 108 Prerequisite Exam (Practice)

1. Simplify the following algebraic expression: $2x - 3[x + 4(5 - 2x)]$

a) $-9x + 20$ b) $-3x - 7$ c) $7x - 20$ d) $23x - 60$ e) $5x - 1$

2. Find the following product: $\frac{-3}{7} \cdot \frac{2}{5}$

a) $\frac{-1}{12}$ b) $\frac{6}{35}$ c) $\frac{-15}{14}$ d) $\frac{-35}{6}$ e) $\frac{-6}{35}$

3. Find the following difference: $-3.5 - (-9.8)$

a) -13.3 b) 13.3 c) -6.3 d) -34.3 e) 6.3

4. 42 is what percent of 80?

a) 1.9% b) 52.5% c) 190.5% d) 33.6% e) 57.2%

5. Solve for x: $4x - 3 = 29$

a) $x = \frac{26}{4}$ b) $x = -8$ c) $x = 8$ d) $x = \frac{1}{8}$ e) $x = 9$

6. Simplify: $\left[\frac{-3x^2y}{12y}\right]^2$

a) $\frac{3x^4y}{4}$ b) $\frac{x^4}{16}$ c) $\frac{x^2}{2}$ d) $\frac{9x^4}{144}$ e) $\frac{-x^2}{4}$

7. Evaluate the expression $\frac{xy - xz}{yz}$ letting $x = -2$, $y = 3$ and $z = -4$.

a) $\frac{-4}{3}$ b) $\frac{5}{2}$ c) $\frac{7}{6}$ d) 0 e) $\frac{-1}{8}$

8. Assume that to earn a C grade or higher in a college course you need at least an average of 70% on the five exams that are each worth 100 points. You have scores of 65, 81, 72, 55 so far in the semester. What is the lowest score you can receive on your fifth exam in order to earn a C or higher?

a) 100 b) 72 c) 77 d) 80 e) 79

9. $(3x^2y^3)(-2x^4y) =$

a) x^6y^4 b) $-6x^8y^3$ c) $-6x^6y^4$ d) $\frac{-3y^2}{2x^2}$ e) $-6x^8y^4$

10. $(16)^{\frac{1}{2}}(27)^{\frac{2}{3}} =$ _____

a) 64 b) 144 c) 36 d) 176 e) 648

11. The relationship between Celsius degrees and Fahrenheit degrees is the equation $F = \frac{9}{5}C + 32$. If F = 59° then C = _____

a) 116.6° b) 1.4° c) 92.8° d) 19.3° e) 15°

12. 34 team field goals out of 60 attempted is what shooting percentage for the team?

a) 56.7% b) 20.4% c) 94.0% d) 31.3% e) 67.8%

13. Add the following mixed fractions: $2\frac{3}{5} + 5\frac{1}{3}$

a) $7\frac{14}{15}$ b) $7\frac{3}{8}$ c) $7\frac{1}{2}$ d) $7\frac{3}{15}$ e) $7\frac{9}{15}$

14. In a history class of 120 students, 60% are females and 25% of the females have blue eyes. What <u>percentage</u> of the history students in the class are blue-eyed females?

a) 30% b) 18% c) 85% d) 15% e) 12%

15. The base of a large rectangular metal box is 3 feet by 4 feet. Its volume is 84 cubic feet. How tall is the box in feet?

a) 77 feet b) 6 feet c) 9 feet d) 7 feet e) 12 feet

16. Of following numbers, which is the <u>smallest</u>?

a) 0.445 b) 0.521 c) $\frac{6}{11}$ d) $\frac{4}{9}$ e) 0.534

17. If $\frac{2}{9}x = 5$, then x = _____

a) $22\frac{1}{2}$ b) $5\frac{2}{9}$ c) $4\frac{7}{9}$ d) $1\frac{1}{9}$ e) 45

18. Simplify the following: $-3 - 4 \cdot 5 + -7(3 - 8)$

a) -112 b) 210 c) 12 d) 0 e) 45

19. Suppose that a new federal tax relief act allows you to pay a10% income tax rate instead of 15% on your taxable income. If your taxable income at the end of the year is $18,000, how much have you saved in tax dollars by virtue of the new tax relief act?

a) $180 b) $900 c) $270 d) $825 e) $2250

20. If there are 12 inches to the foot, 3 feet to the yard and 1,760 yards to the mile, how many inches are in one mile?

a) 7,040 in. b) 63,360 in. c) 48,889 in. d) 70,342 in. e) 58,490 in.

ANSWER KEY

1. d
2. e
3. e
4. b
5. c
6. b
7. c
8. c
9. c
10. c
11. e
12. a
13. a
14. d
15. d
16. d
17. a
18. c
19. b
20. b