Name: Class Standing:

Math Assessment

Welcome to the Marlboro College Math Assessment! The purpose is to begin the conversation about how best to pursue your mathematical goals at Marlboro. The results are not recorded in any permanent way and don't feature on your transcript. When you meet with your advisor, he/she will give you a brief sense of the outcome. Please come and talk to Matt Ollis (math faculty, Sci218) or Jean-Martin Albert (math fellow, Sci205) to see in more detail how you did.

There are two parts to the assessment, one concerning technique and the other about your experiences with math. The technique section contains twelve multiple choice questions to give us a rough sense of where you are and what math course might fit you best. Calculators are not allowed. The experiences section gives you a chance to talk about where you see math fitting into your education and your relationship with math up to this point.

So, let's begin...

Technique

Answer all the questions that you can by circling your choice of answer. If you change your mind then make it clear which you think is correct.

1. What is 2% of 400?

        (a) $\frac{1}{2}$ (b) 2   (c) 4   (d) 8

2. Simplify $7x^3 + 5x - 6x + 1$.

    (a) $7x^3 - x + 1$ (b) $7x^3 + 5x - 6x + 1$ (c) $7x^5$ (d) $6x + 1$

3. With one roll of a regular die what is the probability of getting a 2 or less?

(a) $\frac{1}{6}$ (b) $\frac{1}{3}$ (c) $\frac{1}{2}$ (d) $\frac{2}{3}$

4. If $f(x) = 5x^2 - 4$ then $2f(x) =$

(a) $5x^2 - 2$ (b) $10x^2 - 4$ (c) $20x^2 - 4$ (d) $10x^2 - 8$

5. If $f(x) = 5x^2 - 4$ then $f(2x) =$

(a) $5x^2 - 2$ (b) $10x^2 - 4$ (c) $20x^2 - 4$ (d) $10x^2 - 8$

6. If $y = \frac{x-1}{2}$ then waht is x in terms of y?

(a) $\frac{2}{y-1}$ (b) $y - \frac{1}{2}$ (c) $2y + 1$ (d) $2y - 1$

7. If $2(x + 1) = 24$ then $x =$

(a) 24   (b) 11   (c) 12   (d) 2

8. Solve for x the equation $2(3x + 1) - 3 = 4x - 1$.

    (a) $x = 3$ (b) $x = 2$ (c) $x = 1$ (d) $x = 0$

9. Find the solution to the quadratic equation $x^2 + 2x - 15 = 0$.

    (a) $x = 2, -15$ (b) $x = -5, 3$ (c) $x = -9, 7$ (d) $x = -3, 5$

10. The value of $\frac{1}{6} + \frac{5}{8}$ is

    (a) $\frac{19}{24}$ (b) $\frac{31}{48}$ (c) $\frac{5}{48}$ (d) $\frac{6}{14}$

11. Solve this pair of simultaneous equations for unknowns p and q

$$3p - 4q = 5 \qquad\qquad 2p - 5q = 8$$

    (a) $p = 2, q = -3$ (b) $p = 1, q = -2$

    (c) $p = -1, q = 3$ (d) $p = -1, q = -2$

12. How many prime numbers lie between 20 and 40?

    (a) 3   (b) 4   (c) 5   (d) 6

Your Mathematical Life

Here are a few questions to prompt some thoughts on your experiences with mathematics so far and what you might be interested in the future. If you need more space please use the backs of the sheets, clearly indicating which answer goes with which question.

1. Do you enjoy math? Describe the most enjoyable and least enjoyable experiences you have had with math.

2. What do you hope to achieve in mathematics during your time at Marlboro?

3. Describe what mathematical level you are at. What's the highest level class you have taken? What's the most advanced concept that you have mastered?

4. Anything else? Please share anything relevant that you have not covered already.