

# Math 1050 Final Exam Answer Key

Fall 2014

1.  $(\pi - 1)\sqrt{a} - 9\sqrt{b} - 2x^{1/3} + 2\sqrt{a-b}$

2.  $\frac{m^8}{9n^3}$

3.  $16 + 10\sqrt{10}$

4.  $\frac{4}{3}$

5.  $(-\infty, -10] \cup [14, \infty)$

6.  $\{ \}$

7. The sides are 30cm, 18cm, and 24cm.

8.  $b = \frac{2a^2 - ac - a}{2a - 1}$

9.  $(-\infty, -\frac{1}{2}) \cup (-\frac{1}{2}, \infty)$

10. a.)  $f(3) = 4$       b.)  $a + 1 + \frac{\sqrt{a+2}}{a}$

11.  $2x + h - 2$

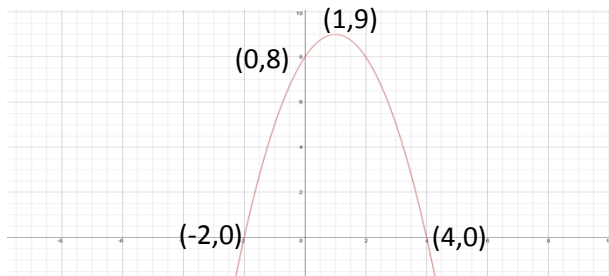
12.  $y = -\frac{1}{5}x + \frac{16}{5}$

13.  $x = -2$

14. The height up the wall is 12 feet.

15.  $\left\{1 \pm \frac{\sqrt{2}}{2}i\right\}$

16. Vertex (1, 9) opens down, y-intercept: (0,8), x-intercepts: (-2,0) and (4,0)



17.  $\frac{x-3}{2x-1}$

18.  $f(7) = -3$

19.  $(-\infty, 0] \cup \left[\frac{6}{5}, \infty\right)$

20.  $(-7, -3)$

21.a.) Domain  $(-\infty, 3)$

b.) Range  $(-\infty, 5)$

c.)  $f(0) = 3$

d.)  $f(-2) = 0$

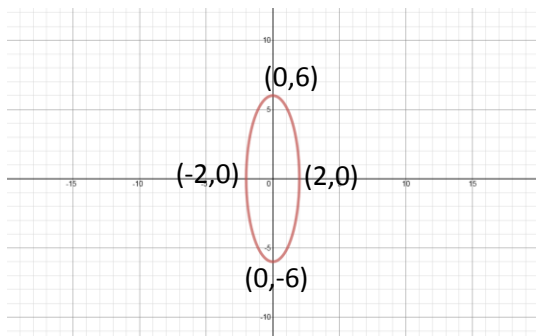
22.  $\{81\}$

23. a.) 3    b.)  $-\frac{1}{3}$     c.) 0

24. a.) 3.3    b.) 6.9    c.) 1.6

25.  $\{6\}$

26. Ellipse with center  $(0, 0)$      $a = 2$      $b = 6$



27.  $\cos(1.7) < \tan(-\pi) < \sin(1.7) < \log_2 3$

28. a.)  $\frac{900^\circ}{\pi}$     b.)  $\frac{\pi}{36}$  radians

29. a.)  $\cos(\angle B) = \frac{3}{\sqrt{34}}$     b.)  $\tan(\angle A) = \frac{3}{5}$

30. Matt runs at 12 feet/sec and hobbles at 4 feet/sec.