

# Math 1050 Final Exam Answer Key

Winter 2016

1.  $\frac{8}{15}abc + 3a^2 - 2b - 2^b$

2.  $-\frac{y}{27z^2}$

3. 15

4.  $\frac{9}{2}$

5.  $\left[-\frac{5}{3}, \frac{7}{3}\right]$

6. No solution

7. Mark bought 8 gallons of blue paint and 4 gallons of white paint.

8.  $k = \frac{7m}{m-a}$

9.  $(-\infty, -6) \cup (-6, 1) \cup (1, \infty)$

10. 2

11.  $2x + h + 1$

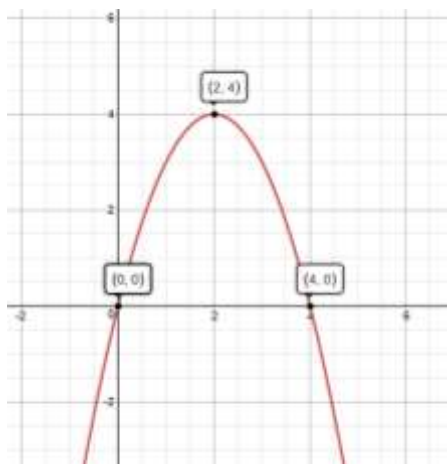
12.  $y = \frac{1}{2}x - \frac{7}{2}$

13.  $y = -8$

14. The lengths of the legs are 2 inches and 4 inches.

15.  $x \in \{3 + i, 3 - i\}$

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



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17.  $\frac{xy}{x+y^2}$

18.  $x = -1$

19.  $(-\infty, 2]$

20.  $(0, 1)$

21. a.) Domain  $(-\infty, -1] \cup [0, \infty)$

b.) Range  $(-3, \infty)$

c.)  $f(0) = 1$

d.)  $f(-4) = 0, f(-3) = 0, f(1) = 0$

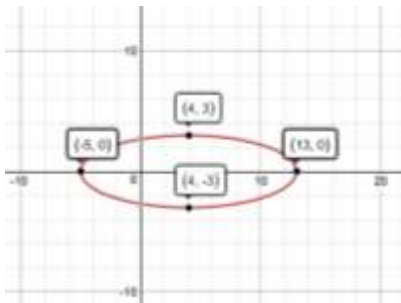
22.  $x = \frac{33}{16}$

23. a.) 3 b.)  $\frac{1}{2}$  c.) -3

24. a.) 2.49 b.) 1.06 c.) 1.72

25.  $x = 5$

26. Ellipse with center  $(4, 0)$   $a = 9, b = 3$



27.  $\cos(4) < \tan(3\pi) < \sin(3) < \frac{\pi}{3}$

28. a.)  $60^\circ$  b.)  $\frac{\pi}{5}$  radians

29. a.)  $2\sqrt{2}$  b.)  $\frac{1}{3}$

30. The speed of the boat in still water is 10 mph.