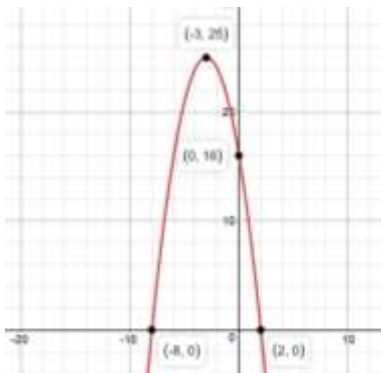


Math 1050 Final Exam Answer Key

Fall 2017

1. $\sqrt{x} - 4y^2 - 3 \cdot 2^y + 3^y - \sqrt{y}$
2. $\frac{3x^5}{2y^{12}z^8}$
3. $37 - 20\sqrt{3}$
4. $\frac{28}{3}$
5. No solution.
6. The longest side is 20 inches, the shortest side is 7 inches, and the third side is 13 inches.
7. $r = \frac{t}{2t-s}$
8. $(-\infty, 5)$
9. -50
10. $4x + 2h$
11. $y = 3x - 1$
12. The area of the rectangle is 45 cm^2 .
13. $\{-3 \pm 3i\}$
14. Vertex $(-3, 25)$ opens down, y-intercept: $(0,16)$, x-intercepts: $(-8,0)$ and $(2,0)$



15. $\frac{-b}{b-1}$

16. $x = 16$

17. $(\mathbf{0}, \mathbf{3}) \cup (\mathbf{3}, \infty)$

18.a.) Domain $(-\infty, -\mathbf{2}) \cup (-\mathbf{2}, \infty)$

b.) Range $[-\mathbf{4}, \infty)$

c.) $x \in \{-\mathbf{1}, \mathbf{3}\}$

d.) $f(\mathbf{0}) = -\mathbf{2}$

19. $\{-64, 125\}$

20. a.) $-\frac{1}{4}$ b.) $\mathbf{3}$ c.) $\frac{3}{2}$

21. $\left\{\frac{4}{5}\right\}$

22. a.) $\frac{1}{9}$ radians b.) $\left(\frac{72}{\pi^2}\right)^\circ$

23. $x = 17\sin(38^\circ)$

24. Bob's typical speed is 9 mph.