

# Math 1050 Final Exam Answer Key

Winter 2019

1.  $-4\sqrt{x^2 + 3} + (4 - \pi)x + 5xy + 2 \cdot 8^x$

2.  $\frac{y^7 z^{15}}{9x^9}$

3.  $30 + 20\sqrt{2}$

4.  $\left[-\frac{5}{3}, \frac{1}{3}\right]$

5.  $\frac{5}{32}$

6. Noor studied 12 hours for algebra, 24 hours for chemistry and 16 hours for biology.

7.  $c = \frac{ab-1}{b-a}$

8.  $(-\infty, -4) \cup (-4, 2) \cup (2, \infty)$

9. 2

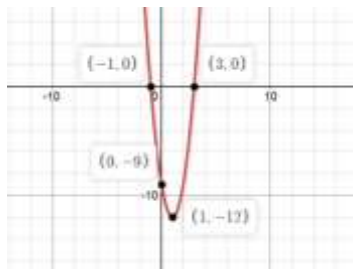
10.  $2x + h - 3$

11.  $y = \frac{3}{5}x - 1$

12.  $x^2 + 2x - 3$

13.  $\{1 \pm i\sqrt{5}\}$

14. Vertex (1, -12) opens up, y-intercept: (0, -9), x-intercepts: (-1, 0) and (3, 0)



15.  $-\frac{1}{2}$

16.  $x = 1$

17.  $(2, \infty)$

18.a.) Domain:  $[-7, 0] \cup (2, 7)$

b.) Range:  $[-7, 7)$

c.)  $f(-2) = -7$

d.)  $x \in \{-7, 4\}$

19.  $\{1, 2\}$

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

21.  $\{5\}$

22.  $\cos(\pi) < \sin(-3) < \cos(-1) < \log_2(5)$

23. a.)  $\frac{\pi^2}{10}$  radians   b.)  $1800^\circ$

24. a.)  $\frac{7}{4}$    b.)  $\frac{7}{\sqrt{65}}$

25. Matt's walking speed is 2 mph.