

Practice Problems For Final - MAT 102 – Answers

- 1.) $\sqrt{37}$ 2.) $f(-3) = 27$ 3.) $30\sqrt[3]{33}$ 4.) $y + 1 = 2(x - 1)$ or $y = 2x - 3$
- 5.) $y - 5 = \frac{1}{2}(x - 2)$ or $y = \frac{1}{2}x + 4$ 6.) $\frac{1}{4}$ 7.) $x = 4$ or $x = -9$
- 8.) $p = -4$ or $p = \frac{-10}{9}$ 9.) $\{x \mid x \leq \frac{-5}{3} \text{ or } x \geq \frac{19}{9}\}$ or $(-\infty, \frac{-5}{3}] \cup [\frac{19}{9}, \infty)$
- 10.) $\{y \mid y \in \mathbb{R}\}$ or $(-\infty, \infty)$
- 11.) $\{x \mid x < \frac{-43}{24} \text{ or } x > \frac{9}{8}\}$ or $(-\infty, \frac{-43}{24}) \cup (\frac{9}{8}, \infty)$
- 12.) no solution or \emptyset 13.) $\{x \mid -1 \leq x \leq 2\}$ or $[-1, 2]$
- 14.) $\{x \mid \frac{-5}{4} \leq x \leq \frac{23}{4}\}$ or $[\frac{-5}{4}, \frac{23}{4}]$
- 15.) $\{x \mid -5 \leq x \leq \frac{25}{7}\}$ or $[-5, \frac{25}{7}]$ 16.) no solution or \emptyset
- 17.) $\{x \mid x < 2 \text{ or } x > 3\}$ or $(-\infty, 2) \cup (3, \infty)$ 18.) $x = \frac{C}{A+B}$
- 19.) $f = \frac{pq}{q+p}$ 20.) $\sqrt[6]{32n^5}$ 21.) \mathbb{R} or $(-\infty, \infty)$ 22.) $\frac{2x+21}{x(x-7)}$
- 23.) 4 liters 24.) $x = 3, x = -3, x = 2, x = -2$
- 25.) $(5x + 4y)(25x^2 - 20xy + 16y^2)$
- 26.) $(p + q)(p^2 - pq + q^2)(p - q)(p^2 + pq + q^2)$ 27.) $x = -3, y = -15$ or $(-3, -15)$
- 28.) $x = \frac{10}{21}, y = \frac{11}{14}$ or $(\frac{10}{21}, \frac{11}{14})$ 29.) $\frac{6}{2x-1}$ 30.) $11\sqrt{5}$ 31.) $\sqrt[12]{x^4y^3}$
- 32.) $x = -6$ 33.) $x = \frac{5}{3}$ 34.) $(2x - 1)(4x^2 + 2x + 1)$