

MAT 105 College Algebra

Self-Assessment of Readiness

Last update: Fall 2024

Students who plan to take MAT 105, some skills they are expected to know before entering the class are listed below.

1. Express $-8^0 + 3^{-1}$ as a single fraction.
2. Find the product of $(2x - 4)(3x + 5)$.
3. Solve for r : $2\pi r = c$.
4. Solve for x : $\frac{14}{6x} = \frac{3}{2}$.
5. Factor completely: $25x^2 - 36y^2$.
6. If $y - 3x = -2$, find the slope and the y -intercept.
7. Simplify: $\sqrt{32}$
8. Add $\frac{1}{x} + \frac{1}{y}$
9. Solve for x : $x^2 + 5x = -6$
10. Simplify $\frac{12x^7y^8}{4x^5y^9}$ and express the answer with positive exponents.

Answers

1. $-\frac{2}{3}$
2. $6x^2 - 2x - 20$
3. $r = \frac{c}{2\pi}$
4. $x = \frac{14}{9}$
5. $(5x + 6y)(5x - 6y)$
6. slope: 3 and y -intercept: $(0, -2)$
7. $4\sqrt{2}$
8. $\frac{x + y}{xy}$
9. $x = \{-2, -3\}$
10. $\frac{3x^2}{y}$