

Sample Prerequisite Problems
MATH 1730 - Instructor: Bobby Jackson

I expect you to be able to perform skills like these in this course. Please review and ask questions.

1. Completely factor the following

a. $x^2 - 11x - 60$ b. $3y^2 + 16y - 12$ c. $75p^2 - 3p^4$ d. $4x^2 - 2xy - 10x + 5y$

2. Simplify

a. $7x(3 - 2x) - 4(3x - 2)$ b. $(x - 2)(x^2 + 2x + 4)$

3. Simplify

a. $a^3(a^7)^2$ b. $\left(\frac{a^2b^3}{c}\right)^{-2}$ c. $\frac{a^2b^{-1}}{a^5b^3c^{-2}}$

4. Simplify

a. $\sqrt{50}$ b. $\sqrt{44x^3}$ c. $\sqrt[3]{27x^3y^{12}}$

5. Simplify by writing as one fraction

a. $\frac{3}{8} - \frac{1}{6}$ b. $\frac{3}{2x} + \frac{5}{7x}$ c. $\frac{7}{x-2} + \frac{4}{x+1}$ d. $\frac{3}{x} - \frac{5}{x^2} + \frac{7}{x-3}$

6. Solve

a. $3x - 7 = 4(2 - x)$ b. $\frac{x}{7} - \frac{3x}{5} = 6$ c. $|3x - 5| = 7$

7. Solve

a. $3x^2 + 11x = 4$ b. $p^2 - 3p - 1 = 0$ c. $(x - 2)(x + 4) = 3$

8. The length l of a rectangle is 3 more than twice its width w . Write a formula for the perimeter P and area A of the rectangle in terms of the width w ONLY.

9. Write the following in interval notation

a. $-2 < x < 7$ b. $4 \leq x < 9$ c. $x \geq -5$ d. $x > 0$

10. Solve and express answer in interval notation

a. $3x < 4x - 7$ b. $5(v - 3) \geq -4(v + 2)$