

The following problems represent the absolute minimum knowledge necessary to have a chance of successful completion of **Math 260 (Pre-Calculus)**. If you are unable to answer these problems, you are strongly advised to take the course indicated for the materials.

Minimum necessary knowledge from Intermediate Algebra (Math 125)

1. Factor: $6x^2 - 13x - 5$
2. Solve: $\frac{1}{x-1} + \frac{1}{x+2} = \frac{5}{4}$
3. Solve: $\log_5 x = 2$
4. Solve: $e^x = 7$
5. Subtract: $\frac{3}{(x-3)(x-1)} - \frac{2}{(x+1)(x-1)}$
6. Solve the nonlinear system of equation:
$$\begin{cases} x^2 - y = 0 \\ x + y = 2 \end{cases}$$
7. Add: $\sqrt[3]{2x^5} + 6x\sqrt[3]{54x^2}$

Minimum necessary knowledge from Trigonometry (Math 240)

8. If $\cos t = \frac{3}{5}$ and t is in quadrant I, find the exact values of all the other trigonometric functions at t .
9. Find all the solutions in the interval $[0, 2\pi)$.
 $2\sin x = -1$
10. Graph $y = 2 + \cos x$ over a two-period interval.