The following problems represent the pre-knowledge necessary to be successful in mastering the content of Math 260 (Pre-Calculus).

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: $\sqrt[3]{2x^5} + 6x\sqrt[3]{54x^2}$

The material above represents concepts covered in Intermediate Algebra (Math 125).

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.

The material above represents concepts covered in Trigonometry (Math 240).