SYNTHETIC DIVISION DRILL

Is $(x - 2)$ a factor of $x^2 + 3x - 10$?
What is the remainder when $5x^2 - 3x + 2$ is divided by $x - 2$?

Solutions

To determine if $(x - 2)$ is a factor of $x^2 + 3x - 10$, divide $x^2 + 3x - 10$ by $(x - 2)$ to to see if there is a remainder. If the remainder is zero, then $(x - 2)$ is a factor. Use synthetic division to divide:

$$\begin{array}{r|rrr} 2 & 1 & 3 & -10 \\ & & 2 & 10 \\ \hline & 1 & 5 & 0 \end{array}$$

The remainder is zero, so $(x - 2)$ is a factor.

Use synthetic division to divide:

$$\begin{array}{r|rrr} 2 & 5 & -3 & 2 \\ & & 10 & 14 \\ \hline & 5 & 7 & 16 \end{array}$$

The remainder is 16 divided by $x - 2$:

$$\frac{16}{x-2}$$

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  https://www.crackpsat.net/psat/reading/

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- **PSAT Math Practice Tests:**

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