

**Progress Check CP: Synthetic Division and Remainder Theorem (C13-C14)**

Name: \_\_\_\_\_

1. a) Divide using Synthetic Division:  $x^3 + 3x^2 - 18x - 40 \div x - 4$

b) Is  $x - 4$  a factor of  $x^3 + 3x^2 - 18x - 40$ ? Explain your reasoning.

2. Determine  $P(-2)$ , if  $\frac{P(x)}{x+2} = x^3 - 4x^2 + 12x - 23$  R 47

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