Questions on polynomial long division from Lesson 6.2?

No quiz today, but make sure you know how to long divide the following using synthetic division and long division.

$$(k^3 + 2k^2 - 46k + 9) \div (k + 8)$$

$$-8 \,|\; 1 \quad 2 \quad -46 \quad 9$$

$$-8 \quad 48 \quad -16$$

$$1 \quad -6 \quad 2 \quad \boxed{-7}$$

$$\boxed{K^2 - 6k + 2 - \frac{7}{k+8}}$$

$$\frac{k^3}{k} \rightarrow \qquad k^2 - 6k + 2$$

$$\frac{-6k^2}{k}$$

$$k+8 \overline{)\, k^3 + 2k^2 - 46k + 9}$$

$$- (k^3 + 8k^2)$$

$$\quad -6k^2 - 46k + 9$$

$$- (-6k^2 - 48k)$$

$$\quad 2k + 9$$

$$- (2k + 16)$$

$$\boxed{-7}$$

Answer:
$$k^2 - 6k + 2 - \frac{7}{k+8}$$

Feb 27-8:47 AM

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Homework
Finish Polynomial Division WKS

Oct 21-8:47 AM