

1. Divide.

a) $\frac{35x^5y^4 - 49x^2y^3 + 12xy}{7x^2y}$

$$= \frac{35x^5y^4}{7x^2y} - \frac{49x^2y^3}{7x^2y} + \frac{12xy}{7x^2y}$$

$$= 5x^3y^3 - 7y^2 + \frac{12}{7x}$$

b) $\frac{2x^3 + 5x + x^2 + 13}{2x + 3}$

$\frac{2x^3}{2x}$ $\frac{-2x^2}{2x}$ $\frac{8x}{2x}$

$$x^2 - x + 4$$

$$2x + 3 \overline{) 2x^3 + x^2 + 5x + 13}$$

$$\underline{-(2x^3 + 3x^2)}$$

$$-2x^2 + 5x$$

$$\underline{-(-2x^2 - 3x)}$$

$$8x + 13$$

$$\underline{-(8x + 12)}$$

$$1$$

$$\frac{2x^3 + 5x + x^2 + 13}{2x + 3} = x^2 - x + 4 + \frac{1}{2x + 3}$$

c) $(x^3 - 8) \div (x - 2)$

$$= x^2 + 2x + 4$$

$$x - 2 \overline{) x^3 + 0x^2 + 0x - 8}$$

$$\underline{-(x^3 - 2x^2)}$$

$$2x^2 + 0x$$

$$\underline{-(2x^2 - 4x)}$$

$$4x - 8$$

$$\underline{-(4x - 8)}$$

$$0$$

Q: A man leaves home and, after making three left turns, he ends up back at home, and finds two masked men waiting for him. What is happening?