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$$(9d^3 + 5d - 8) \div (3d - 2)$$

Divide everyone by 3 to make that = 1

$$(3d^3 + \frac{5}{3}d - \frac{8}{3}) \div (d - \frac{2}{3})$$

$$\begin{array}{r} \frac{2}{3} \overline{) 3 \quad 0 \quad \frac{5}{3} \quad -\frac{8}{3}} \\ \underline{3 \quad 2 \quad \frac{4}{3} \quad 2} \phantom{0} \\ 3 \quad 2 \quad 3 \quad -\frac{2}{3} \end{array}$$

$$3d^2 + 2d + 3 - \frac{2/3}{d - 2/3} \rightarrow \boxed{3d^2 + 2d + 3 - \frac{2}{3d - 2}}$$

$$35) (2c^3 - 3c^2 + 3c - 4) \div (c - 2)$$

$$\begin{array}{r} 2 \overline{) 2 \quad -3 \quad 3 \quad -4} \\ \underline{\phantom{2} \quad 4 \quad 2 \quad 10} \\ 2 \quad 1 \quad 5 \quad 6 \end{array}$$

$$2c^2 + c + 5 + \frac{6}{c-2}$$

$$36) (2x^3 - x^2 + 5x - 12) \div (2x - 3)$$

Divide by 2

$$(x^3 - \frac{1}{2}x^2 + \frac{5}{2}x - 6) \div (x - \frac{3}{2})$$

$$\begin{array}{r} \frac{3}{2} \overline{) 1 \quad -\frac{1}{2} \quad \frac{5}{2} \quad -6} \\ \underline{\phantom{1} \quad \frac{3}{2} \quad \frac{3}{2} \quad 6} \\ 1 \quad 1 \quad 4 \quad 0 \end{array}$$

$$\boxed{x^2 + x + 4}$$

$$38) (6w^5 - 18w^2 - 120) \div (w - 2)$$

$$\begin{array}{r} 2 \overline{) 6 \quad 0 \quad 0 \quad -18 \quad 0 \quad -120} \\ \underline{\phantom{6} \quad 12 \quad 24 \quad 48 \quad 60 \quad 120} \\ 6 \quad 12 \quad 24 \quad 30 \quad 60 \quad 0 \end{array}$$

$$\boxed{6w^4 + 12w^3 + 24w^2 + 30w + 60}$$