

RD SHARMA
Solutions
Class 8 Maths
Chapter 8
Ex8.3

Divide: Question 1 $x+2x^2+3x^4-x^5$ by $2x$ **Soln:**

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

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

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

Question 2 $y^4-3y^3+\frac{1}{2}y^2$ by $3y$ **Soln:**

$$\frac{y^4-3y^3+\frac{1y^2}{2}}{3y}$$

$$= \frac{y^4}{3y} - \frac{3y^3}{3y} + \frac{\frac{1y^2}{2}}{3y}$$

$$= \frac{1y^{4-1}}{3} - y^{3-1} + \frac{1y^{2-1}}{6}$$

$$= \frac{1y^3}{3} - y^2 + \frac{1y^1}{6}$$

Question 3 $-4a^3+4a^2+a$ by $2a$ **Soln:**

$$\frac{-4a^3+4a^2+a}{2a}$$

$$= \frac{-4a^3}{2a} + \frac{4a^2}{2a} + \frac{a}{2a}$$

$$= -2a^{(3-1)}+2a^{(2-1)}+\frac{1}{2}$$

$$= -2a^2+2a+\frac{1}{2}$$

Question 4 $-x^6+2x^4+4x^3+2x^2$ by $\sqrt{2}x^2$ **Soln:**

$$\frac{-x^6+2x^4+4x^3+2x^2}{\sqrt{2}x^2}$$

$$= \frac{-x^6}{\sqrt{2}x^2} + \frac{2x^4}{\sqrt{2}x^2} + \frac{4x^3}{\sqrt{2}x^2} + \frac{2x^2}{\sqrt{2}x^2}$$

$$= \frac{-1x^{6-2}}{\sqrt{6}} + \sqrt{2}x^{4-2} + 2\sqrt{2}x^{3-2} + \sqrt{2}x^{2-2}$$

$$= \frac{-1x^4}{\sqrt{6}} + \sqrt{2}x^2 + 2\sqrt{2}x^1 + \sqrt{2}x^0$$

$$= \frac{-1x^4}{\sqrt{6}} + \sqrt{2}x^2 + 2\sqrt{2}x + \sqrt{2}$$

Question 5

$5z^3 - 6z^2 + 7z$ by $2z$

Soln:

$$= \frac{5z^3 - 6z^2 + 7z}{2z}$$

$$= \frac{5z^3}{2z} - \frac{6z^2}{2z} + \frac{7z}{2z}$$

$$= \frac{5z^{3-1}}{2} - 3z^{2-1} + \frac{7}{2}$$

$$= \frac{5z^2}{2} - 3z + \frac{7}{2}$$

Question 6

$\sqrt{3}a^4 + 2\sqrt{3}a^3 + 3a^2 - 6a$ by $3a$

Soln:

$$\frac{\sqrt{3}a^4 + 2\sqrt{3}a^3 + 3a^2 - 6a}{3a}$$

$$= \frac{\sqrt{3}a^4}{3a} + \frac{2\sqrt{3}a^3}{3a} + \frac{3a^2}{3a} - \frac{6a}{3a}$$

$$= \frac{1a^{4-1}}{\sqrt{3}a} + \frac{2a^{3-1}}{\sqrt{3}a} + a^{2-1} - 2$$

$$= \frac{1a^3}{\sqrt{3}a} + \frac{2a^2}{\sqrt{3}a} + a^1 - 2$$