Division of Polynomials

Divide.

1) $\left(45m^4 + 9m^3 + 9m^2\right) \div 9m^2$

   A) $\dfrac{1}{4} + \dfrac{1}{2m} + \dfrac{5}{m^2}$

   B) $\dfrac{m}{4} + 3 + \dfrac{4}{m}$

   C) $\dfrac{m^2}{2} + \dfrac{m}{2} + 3$

   D) $5m^2 + m + 1$

2) $\left(8m^4 + 12m^3 + 4m^2\right) \div 4m^2$

   A) $5m^2 + 2m + \dfrac{1}{4}$

   B) $5m^5 + \dfrac{m^4}{4} + \dfrac{m^3}{2}$

   C) $2m^2 + 3m + 1$

   D) $3m^3 + 5m^2 + 4m$

3) $\left(27n^4 + 36n^3 + 9n^2\right) \div 9n^2$

   A) $3n^2 + 4n + 1$

   B) $\dfrac{5n}{4} + 2 + \dfrac{1}{n}$

   C) $\dfrac{n^3}{6} + \dfrac{n^2}{3} + 2n$

   D) $4n^2 + \dfrac{n}{2} + \dfrac{1}{6}$

4) $\left(4x^5 + 2x^4 + 2x^3\right) \div 2x^2$

   A) $x^2 + \dfrac{x}{2} + 1$

   B) $2x^3 + x^2 + x$

   C) $\dfrac{x^5}{5} + \dfrac{x^4}{5} + x^3$

   D) $\dfrac{2x^2}{3} + \dfrac{x}{3} + 2$

5) $\left(10n^3 + 10n^2 + 10n\right) \div 5n$

   A) $\dfrac{n}{3} + \dfrac{1}{3} + \dfrac{2}{3n}$ B) $n^2 + 2n + 1$

   C) $2n^2 + 2n + 2$ D) $2 + \dfrac{2}{n} + \dfrac{2}{n^2}$

6) $\left(5m^4 + 10m^3 + 5m^2\right) \div 5m$

   A) $m^3 + 2m^2 + m$

   B) $1 + \dfrac{2}{m} + \dfrac{1}{m^2}$

   C) $2m^3 + m^2 + 2m$

   D) $\dfrac{m^3}{5} + m^2 + m$

Answers to Division of Polynomials

1) D

2) C

3) A

4) B

5) C

6) A