

King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics

Math 102-16-Term142-Quiz.5

Name: _____ ID: _____ Serial#: _____

Circle the correct answer. Do not compute the coefficients.

1. $\frac{-2x + 4}{(x^2 + 1)(x^2 - 2x + 1)} =$

(a) $\frac{A}{x^2 + 1} + \frac{Bx + C}{x^2 - 2x + 1}$

(b) $\frac{ax + b}{x^2 + 1} + \frac{c}{x - 1} + \frac{d}{(x - 1)^2}$

(c) $\frac{a}{x^2 + 1} + \frac{c}{x - 1} + \frac{d}{(x - 1)^2}$

2. $\frac{1}{x^3(x^2 + 1)^2} =$

(a) $\frac{a}{x} + \frac{b}{x^2} + \frac{c}{x^3} + \frac{Ax + B}{x^2 + 1} + \frac{Cx + D}{(x^2 + 1)^2}$

(b) $\frac{a}{x} + \frac{b}{x^2} + \frac{c}{x^3} + \frac{Cx + D}{(x^2 + 1)^2}$

(c) $\frac{a}{x^3} + \frac{Ax + B}{x^2 + 1} + \frac{Cx + D}{(x^2 + 1)^2}$

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

$$(a) \frac{ax + b}{x^4 - 1} + \frac{c}{x - 1} + \frac{d}{x + 1}$$

$$(b) \frac{a}{x^2 - 1} + \frac{b}{x^2 + 1}$$

$$(c) \frac{ax + b}{x^2 + 1} + \frac{c}{x - 1} + \frac{d}{x + 1}$$

$$4. \frac{1}{x^4 + x} =$$

$$(a) \frac{a}{x} + \frac{b}{x + 1} + \frac{cx + d}{x^2 - x + 1}$$

$$(b) \frac{a}{x} + \frac{b}{x + 1} + \frac{cx + d}{x^2 + x + 1}$$

$$(c) \frac{b}{(x + 1)^2} + \frac{cx + d}{x^2 - x + 1}$$