

King Fahd University of Petroleum and Minerals
Faculty of Science, Prep-Year Math Program
Math 001 - Term 032
Recitation hour (2.6 & 3.1)

Question1

Find the difference quotient of the function $f(x) = 2x^2 + 4x - 3$.

Question2

If $f(x) = \sqrt{x^2 - 1}$ and $g(x) = |x| - 2$, then find the domain of the function $\left(\frac{f}{g}\right)(x)$.

Question3

If $f(x) = \sqrt{1 - x^2}$, then find $f \circ f(x)$.

Question4

If $P(x) = 24x^5 + 20x^3 - 16x^2 - 15$ is divided by $D(x) = 6x^2 + 5$, then find the quotient $Q(x)$ and the remainder $R(x)$.

Question5

If $P(x) = 123x^4 - 124x^3 + 124x^2 + 122x - 3$, then find the exact value of $P\left(\frac{1}{123}\right)$.