PRINTABLE VERSION

Quiz 17

Question 1

Use long division to find the quotient and remainder of

$$\frac{9x^3 + 9x^2 + 10x + 2}{x^2 + x + 10}$$

a) ○ [Q = 9 x, R = −80 x + 2]

b) ○ [Q = 9 x, R = 28 x]

c) ○ [Q = 9 x + 18 , R = 10 x]

d) ○ [Q = 9 x, R = 10 x]

e) ○ [Q = 9 x, R = 28 x − 180]

f) ○ None of the above

Question 2

Use long division to find the quotient and remainder of

$$\frac{9x^4 + 6x^2 + x + 4}{x^3 - x + 2}$$

a) ○ [Q = 9 x, R = 15 x² + 19 x + 4]

b) ○ [Q = 9 x, R = 15 x² − 17 x + 4]

c) ○ [Q = 9 x + 9 , R = 6 x² + x + 4]

d) ○ [Q = 9 x, R = 15 x² − 17 x]

e) ○ [Q = 9 x, R = −3 x² − 17 x + 4]

f) ○ None of the above

Question 3

Your answer is CORRECT.

Use long division to find the quotient and remainder of

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

a) ○ $[Q = -2x \,, R = 4]$

b) ○ $[Q = x - 3 \,, R = 14]$

c) ○ $[Q = 2x - 3 \,, R = 7]$

d) ○ $[Q = x + 2 \,, R = -3]$

e) ○ $[Q = 2x + 3 \,, R = -7]$

f) ○ None of the above

Question 4

Use synthetic division to find the quotient and remainder of

$$\frac{2x^2 + 2x - 1}{x + 1}$$

a) ○ $[Q = 2x, R = 0]$

b) ○ $[Q = 2x + 2 \,, R = -1]$

c) ○ $[Q = 2x + 1 \,, R = -1]$

d) ○ $[Q = 2x, R = -4]$

e) ○ $[Q = 2x, R = -1]$

f) ○ None of the above

Question 5

Use synthetic division to find the quotient and remainder of

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

a) ○ $[Q = 3x^2 + 6x + 14 \ , R = 25]$

b) ○ $[Q = 3x^2 + 6x + 16 \ , R = 25]$

c) ○ $[Q = 3x^2 + 6x + 14 \ , R = 29]$

d) ○ $[Q = 3x^2 + 6x + 17 \ , R = 25]$

e) ○ $[Q = 3x^2 + 6x + 14 \ , R = 27]$

f) ○ None of the above

Question 6

Use synthetic division to evaluate $P(-4)$

$$P(x) = x^3 - 4x^2 - 9x + 36$$

a) ○ -56

b) ○ -63

c) ○ -53

d) ○ -66

e) ○ -65

f) ○ None of the above

Question 7

Use Remainder Theorem to evaluate $P(4)$

$$P(x) = 2x^4 - 7x^3 + 6x - 14$$

a) ○ 69

b) ○ 73

c) ○ 72

d) ○ 74

e) ○ 80

f) ○ None of the above

Question 8

Your answer is CORRECT.

Given $x = 1$ is a zero of the polynomial

$$P(x) = x^3 - 2x^2 - 19x + 20$$

find the other zero of $P(x)$.

a) ○ $x = -1$, $x = 4$

b) ○ $x = -4$, $x = 5$

c) ○ $x = -3$, $x = 2$

d) ○ $x = -4$, $x = 1$

e) ○ $x = 1$, $x = 5$

f) ○ None of the above

Question 9

Find a polynomial of degree 3, whose zeros are $4, -5$, and 4.

a) ○ $P(x) = -x^3 - 3x^2 - 56x + 80$

b) ○ $P(x) = x^3 - 3x^2 - 24x + 80$

c) ○ $P(x) = x^3 + 5x^2 - 24x + 80$

d) ○ $P(x) = x^3 - 13x^2 - 24x + 80$

e) ○ $P(x) = x^3 + 3x^2 - 24x - 80$

f) ○ None of the above

Question 10

Given $x - 2$ is a factor of the polynomial

$$P(x) = x^3 - 12x^2 + 45x - 50$$

find all the zeros of the polynomial.

a) ○ $-2, -5, -5$

b) ○ $2, 5, 5$

c) ○ $-2, 5, 5$

d) ○ $2, 5, -5$

e) ○ $2, -5, 5$

f) ○ None of the above