Name: _____

Date: _____ Score: _____

MATH MONKS

Remainder Theorem Worksheet

Use the remainder theorem to solve the following

① Find the remainder when $4x^3 - 20x^2 + 8x - 6$ is divided by each of the following

a. $x - 2$ _____

b. $x - 6$ _____

c. $x - 7$ _____

② Divide each polynomial to find the remainder.

a. $(x^3 + 6x^2 - 27x + 12) \div (x - 3)$ _____

b. $(12x^4 + 2x^3 - 6x^2 - 4) \div (x + 1)$ _____

③ When divided by $(x - 3)$ and $(x - 5)$, the polynomial $px^3 + qx^2 - 7x + 3$ leaves remainders of 36 and 168, respectively. Find the values of p and q.

_____

Name: _____

Date: _____ Score: _____

MATH MONKS

Remainder Theorem Worksheet

Answers

① Find the remainder when $4x^3 - 20x^2 + 8x - 6$ is divided by each of the following

a. $x - 2$

-38

b. $x - 6$

186

c. $x - 7$

442

② Divide each polynomial to find the remainder.

a. $(x^3 + 6x^2 - 27x + 12) \div (x - 3)$

12

b. $(12x^4 + 2x^3 - 6x^2 - 4) \div (x + 1)$

0

③ When divided by $(x - 3)$ and $(x - 5)$, the polynomial $px^3 + qx^2 - 7x + 3$ leaves remainders of 36 and 168, respectively. Find the values of p and q.

p = 1, q = 3