Name: _____

Date: _____ Score: _____

MATH MONKS

FACTOR THEOREM

Evaluate each function for the given value.

① $f(x) = x^3 + 5x^2 + 10x + 12$
$x = -2$

② $f(x) = x^3 + 3x^2 + 2x + 8$
$x = -3$

③ $f(x) = x^3 + x^2 - 5x - 6$
$x = 2$

④ $f(x) = -x^3 + 6x - 7$
$x = 2$

Use synthetic division method to solve.

⑤ $(x^3 + 8) \div (x + 2)$

⑥ $(4x^2 - 1) \div (x - \frac{1}{2})$

⑦ $(x^2 - 25) \div (x - 5)$

⑧ $(2x^3 - 3x + 1) \div (x - 1)$

Name: _____

Date: _____ Score: _____

MATH MONKS

FACTOR THEOREM

Answers

Evaluate each function for the given value.

① $f(x) = x^3 + 5x^2 + 10x + 12$
$x = -2$

4

② $f(x) = x^3 + 3x^2 + 2x + 8$
$x = -3$

2

③ $f(x) = x^3 + x^2 - 5x - 6$
$x = 2$

-4

④ $f(x) = -x^3 + 6x - 7$
$x = 2$

-3

Use synthetic division method to solve.

⑤ $(x^3 + 8) \div (x + 2)$

$(x^2 - 2x + 4)$

⑥ $(4x^2 - 1) \div (x - \frac{1}{2})$

$(4x + 2)$

⑦ $(x^2 - 25) \div (x - 5)$

$(x + 5)$

⑧ $(2x^3 - 3x + 1) \div (x - 1)$

$(2x^2 + 2x - 1)$