Math 3 Honors Name_____ ID: 1

Unit 3 Test 1 Review

Date_____ Period____

Divide.

1) $(m^3 - 9m^2 - 16m + 64) \div (m - 10)$

2) $(x^3 + 2x^2 + 6x + 22) \div (x + 3)$

3) $(p^3 - 13p^2 + 48p - 40) \div (p - 7)$

4) $(r^3 + 4r^2 - 24r + 71) \div (r + 8)$

Evaluate each function at the given value using synthetic division and substitution.

5) $f(x) = 4x^4 + 13x^3 + 4x^2 - 16x + 4$ at $x = -2$

6) $f(a) = -6a^4 - 16a^3 + 7a^2 + 4a$ at $a = -3$

7) $f(x) = 2x^4 + 13x^3 + 23x^2 + 18x + 31$ at $x = -4$

8) $f(m) = m^3 + 3m^2 - 20m - 12$ at $m = -6$

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Divide.

1) $(m^3 - 9m^2 - 16m + 64) \div (m - 10)$

$m^2 + m - 6 + \frac{4}{m - 10}$

2) $(x^3 + 2x^2 + 6x + 22) \div (x + 3)$

$x^2 - x + 9 - \frac{5}{x + 3}$

3) $(p^3 - 13p^2 + 48p - 40) \div (p - 7)$

$p^2 - 6p + 6 + \frac{2}{p - 7}$

4) $(r^3 + 4r^2 - 24r + 71) \div (r + 8)$

$r^2 - 4r + 8 + \frac{7}{r + 8}$

Evaluate each function at the given value using synthetic division and substitution.

5) $f(x) = 4x^4 + 13x^3 + 4x^2 - 16x + 4$ at $x = -2$

12

6) $f(a) = -6a^4 - 16a^3 + 7a^2 + 4a$ at $a = -3$

−3

7) $f(x) = 2x^4 + 13x^3 + 23x^2 + 18x + 31$ at $x = -4$

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8) $f(m) = m^3 + 3m^2 - 20m - 12$ at $m = -6$

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