

Assignment 1 Lesson 6.1 - 6.3

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Date _____ Period _____

Simplify each expression.

1) $(7 - 5p^4 - 2p) - (2p - 2 - 3p^4)$

2) $(b^3 - 4b - 4b^2) + (5b^3 + 5b - 4b^2)$

3) $(2m^4 + 4m^3 - 2m^2) + (7m^2 - 6m^4 - 7m^3)$

4) $(a^3 - 4a + 5a^2) - (2a^3 + 8a^2 - a)$

Divide.

5) $(m^3 - 3m^2 - 28m + 68) \div (m - 6)$

6) $(n^3 + 9n^2 + 21n + 22) \div (n + 6)$

7) $(b^3 - b^2 - 7b + 3) \div (b - 2)$

8) $(r^3 + 10r^2 + 18r - 20) \div (r + 4)$

9) $(35x^5 - 19x^4 - 45x^3 + 10x^2 + 23x - 15) \div (7x - 8)$

10) $(6p^5 - 34p^4 - 98p^3 - 38p^2 + 60p + 51) \div (6p + 8)$

State if the given binomial is a factor of the given polynomial.

11) $(6n^4 + 10n^3 - 34n^2 + 52n - 7) \div (6n - 2)$

12) $(5n^5 - 12n^4 + 19n^3 + 9n^2 - 41n + 14) \div (5n - 2)$

Factor each.

13) $f(x) = x^3 - 25x$

14) $f(x) = x^2 - x - 12$

15) $f(x) = x^6 + 2x^4 - 25x^2 - 50$

16) $f(x) = x^7 - 4x^5 - 9x^3 + 36x$