7.3 Dividing Polynomials by Monomials

1. Divide each expression.

a) $\frac{9x^2 - 3x}{-3x}$

b) $\frac{4x^2 + 6x}{2x}$

c) $\frac{4x^2 - 6x}{-2x}$

d) $\frac{9x^2 + 6xy}{3x}$

2. Find the quotient.

a) $\frac{15x^2 - 20x}{5x}$

b) $\frac{16m^2 + 20mn}{4m}$

c) $\frac{18k^2 - 9k}{9k}$

d) $\frac{12m + 18mn}{-6m}$

e) $\frac{1.4d^2 + 1.8dk - 1.6d}{2d}$

f) $\frac{9c^2 - 12c + 6}{-3}$

6. You are decorating the bulletin board in your classroom with pictures of your classmates. Each picture covers an area of $4x$ cm^2. The area of the board is $4x^2 + 16x$ cm^2. Write an expression to represent how many pictures are required to cover the board.

7. A rectangular lawn has a width of $3x$ m. The area is $15x^2 + 45x$ m^2. You wish to put a fence around the lawn.

a) What is an expression to represent the perimeter of the lawn?

b) You are placing a post every 2 m. Find an expression to represent how many posts will be required.