1. State true or false.

a) $(2x)^3 = 8x^3$

b) $\sqrt{x^2 + 9} = x + 3$

c) $\sqrt{36x^2} = 6x$

d) $3(2x)(5x) = 6x \cdot 15x$

e) $\frac{25x + 40}{5} = 5x + 8$

f) $(x + 5)^2 = x^2 + 25$

g) $\frac{(9x)(6x)}{3} = (3x)(2x)$

h) $10(x^2 - 3x + 2) = 10x^2 - 30x + 20$

2. Let f be the expression $\frac{15 + 60x^3\sqrt{30x}}{45x^2 + 30x}$.

a) List the terms of the numerator.   b) Simplify f.   c) Multiply f by 3.   d) Divide f by 3.

3. Let p be the polynomial $9x - \frac{5x^8}{6} + 12$.

a) What is the leading coefficient?   b) What type of polynomial is p?   c) Write p in standard form.   d) Multiply p by 10.