Pre Calculus- Roots Polynomial Functions

**Please note: this symbol (^) = power. Such as, 2x to the 4th power as shown in problem #1.**

1. find all possible rational roots of: f(x)=2x ^4 - 5x^3 +8x +4x+7
2. find all possible rational roots of: f(x) =x^3 + 4x^2- 3x-5
3. find all possible rational roots of: f(x)= x^3 +25
4. find all the real roots of f(x) = x^4 –x^3 – 7x^2 + 5x +10
5. find all possible rational roots of: f(x) =6x^3 – 25x^2 -2x +56
6. find all possible rational roots of: f(x) =4x^3 +4x^2 -8x

1. find all the real roots of f(x)= 2^3 – 3x^2 -4x +6
2. find all the real roots of f(x) =x^4 – 3x^3 -6x^2 +6x +8
3. find all the real roots of f(x) = x^3 + x^2 -8x -6
4. How many real roots does f(x) = x^4 + 3x^2 + 2 have?
5. Find the number of possible positive and negative real zeros of :f (x) =x^4 – x^3 + 2x^2 +x – 5
6. Find the number of possible positive and negative real zeros of :f (x) = 3x^3 -4x^2 -5x +1
7. Find the number of possible positive and negative real zeros of :f (x) = 5x^6 +4x^5 +3x^4 -2x^3 +2x^2 –x -1