CH.2 AB HW 2-1 Derivative by Definition Name_____

Find each derivative

Use $f'(x)=\lim_{h\to 0}\dfrac{f(x+h)-f(x)}{h}$ for each problem.

1) $f(x)=x^2-7$ Find $f'(x)$

$f'(x)=$

2) $f(x)=4x^2-5x+1$ Find $f'(x)$ and $f'(2)$.

$f'(x)=$

3) $f(x)=\dfrac{1}{x}$ Find $f'(x)$ and $f'(3)$.

$f'(x)=$

4) $f(x)=x^2+8x$ Find equation of the tangent line and normal line at $x=-2$.

Equation of the tangent line :

Equation of the normal line :