Have you reached your limit?   NAME:

Find the limits below. Show work on simplifications. Please circle final answers. If a limit does *not* exist, say so by writing d.n.e.

1. $\lim\limits_{x \to 2}\left(4x^2 + 5\right)$

2. $\lim\limits_{x \to 2}\left(\dfrac{4x^2 + 5}{x - 2}\right)$

3. $\lim\limits_{x \to 2}\left(\dfrac{x^2 - 4}{x - 2}\right)$

4. $\lim\limits_{x \to 0} \sqrt{x}$

5. $\lim\limits_{x \to 0} \sqrt{x + 5}$

6. $\lim\limits_{x \to 1} \left(4x^3 + 5x - 7\right)$

7. $\lim\limits_{x \to 0} \dfrac{\cos x - 1}{\cos^2 x - 1}$

8. $\lim\limits_{x \to 5} \left(\dfrac{4x^2 + 5}{x - 2}\right)$

9. $\lim\limits_{h \to 0} \dfrac{3h^2 + 12h}{h}$

10. $\lim\limits_{x \to -b} \left(\dfrac{(x+b)^5 + (x+b)^3}{3(x+b)}\right)$