Calculus Ch 2 More Limit Problems #1

Show ALL Work!

1. $\lim_{x \to 2} \dfrac{\sqrt{x+2} - 2}{x-2} = \dfrac{1}{4}$

2. $\lim_{x \to 1} \dfrac{1-x}{2-\sqrt{x^2+3}} = 2$

3. $\lim_{h \to 0} \dfrac{\sqrt{h+5} - \sqrt{5}}{h} = \dfrac{1}{2\sqrt{5}}$

4. $\lim_{x \to 3} \dfrac{2x^3 - 6x^2 + x - 3}{x-3} = 19$

5. $\lim_{x \to -3} \dfrac{x+3}{\sqrt{x^2+7} - 4} = -\dfrac{4}{3}$

6. $\lim_{x \to -1} \dfrac{x^4 - 2x - 3}{x+1} = -6$

7. $\lim_{x \to 2} \dfrac{\sqrt{x+7} - 3}{\sqrt{x+2} - 2} = \dfrac{2}{3}$

8. $\lim_{r \to 1} \dfrac{r^2 - r}{2r^2 + 5r - 7} = \dfrac{1}{9}$

Calculus Ch 2 More Limit Problems #2

Show ALL Work!

1. $\lim_{r \to -3} \frac{r^2+2r-3}{r^2+7r+12} = -4$

2. $\lim_{K \to 4} \frac{K^2-16}{\sqrt{K}-2} = 32$

3. $\lim_{H \to 0} \frac{(X+H)^2 - X^2}{H} = 2X$

4. $\lim_{h \to -2} \frac{h^3+8}{h+2} = 12$

5. $\lim_{X \to -3} \frac{X+3}{\frac{1}{X}+\frac{1}{3}} = -9$

6. $\lim_{x \to 25} \frac{\sqrt{x}-5}{x-25} = \frac{1}{10}$

7. $\lim_{h \to 0} \frac{1}{h}\left(\frac{1}{\sqrt{1+h}} - 1\right) = -\frac{1}{2}$

8. $\lim_{x \to -2} \frac{x^3+8}{x^4-16} = -\frac{3}{8}$