Homeworks for 3^{rd} week

(a)
$$\lim_{x\to 2} \frac{x^2-3x+2}{x^2-2x}$$

(b)
$$\lim_{x\to -\infty} \frac{x^6+7x^4-40}{1-x-5x^7}$$

(c)
$$\lim_{x\to \infty} \frac{x^3+x^2-4}{2x^3+11}$$

(d)
$$\lim_{x\to \infty} \frac{\sqrt{x+2}-\sqrt{2}}{x}$$

(e)
$$\lim_{x\to 0} \frac{1-\cos x}{x}$$

(f)
$$\lim_{x\to 1} \left(\frac{1}{x^2-1} - \frac{2}{x^4-1} \right)$$

(g)
$$\lim_{x\to \infty} \frac{\sqrt{x^2+1}}{x}$$

(h)
$$\lim_{x\to \infty} \sqrt{x-3}-\sqrt{x}$$

(i)
$$\lim_{x\to 1} \frac{\mathrm{tg}(x-1)}{\sqrt{x}-1}$$