#21 $f(x)$ is a rational function,
its v.asymptotes are zeros of denominator, i.e.

$x^2+2x-8=0$

$(x-2)(x+4)=0$

$x-2=0$ or $x+4=0$

$x=2$ or $x=-4$

$\boxed{\text{V. Asymptotes : } x=2 \text{ and } x=-4}$

#22 you could do the long division or synthetic division. However, the ~~Factor~~ Remainder Theorem can do it faster!

Remainder theorem: if the polyn. $f(x)$ is divided by $x-C$, then the remainder is $f(C)$

$x+2$ $x-C$ what is C in $x+2$?

$C=-2$ because $x+2=x-(-2)$

Hence if $f(x)=2x^3-5x^2+x+2$, then the remainder from the division of $f(x)$ by $x+2$ is $f(-2)$

$f(-2)=2(-2)^3-5(-2)^2+(-2)+2=$

$=-16-20-\cancel{2}+\cancel{2}=\boxed{-36}$

#23 we can quickly check divisibility by checking the remainder from division of $\underbrace{2x^3-5x^2+x+2}_{f(x)}$ by $x-1$.

Again, we will use the remainder theorem (with $C=1$)

$f(1)=2\cdot1^3-5\cdot1^2+1+2=2-5+1+2=0$

Then, by the Factor Theorem, since $f(1)=0$ then $x-1$ is a factor of $2x^3-5x^2+x+2$, hence it is divisible by x-