Fill In The Blanks…

**Using the Factor Theorem**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cubic Expression** | **Is** $(x-1)$ **a factor?** | **Is** $(x-2)$ **a factor?** | **Is** $(x+1)$ **a factor?** | **Is** $(x+3) $**a factor?** | **Factorised Expression** |
| $$x^{3}+2x^{2}-13x+10$$ | Yes | Yes | No | No | $$(x-1)(x-2)(x+5)$$ |
| $$x^{3}-5x^{2}+2x+8$$ | No | Yes | Yes | No | $$\left(x-2\right)\left(x+1\right) $$ |
| $$x^{3}-2x^{2}-21x-18$$ | No | No | Yes | Yes | $$\left(x+3\right)(x+1) $$ |
| $$x^{3}+x^{2}-14x+24$$ |  | Yes |  |  | $$\left(x-2\right) $$ |
| $$x^{3}-10x^{2}+23x-14$$ | Yes |  |  |  | $$\left(x-1\right) $$ |
| $$x^{3}+8x^{2}-x-8$$ |  |  |  |  |  |
| $$x^{3}-4x^{2}-11x+30$$ |  |  |  |  |  |
| $$x^{3}-x^{2}-16x+16$$ |  |  |  |  |  |
| $$x^{3}+3x^{2}-18x-40$$ |  |  |  |  |  |
| $$x^{3}-8x^{2}+13x-6$$ |  |  |  |  |  |