Math 222-Quiz-makeup (solution) (53402)

**Choose the correct answer**

1. For the linear system $\begin{matrix}2x-2y+z=1\\x-z=1\\2x-z=2\end{matrix},$ the value for $x$ is equal to,

 (a) $\frac{\left|A\_{x}\right|}{\left|A\right|}= \frac{2}{2}$ (b) $\frac{\left|A\_{x}\right|}{\left|A\right|}= -\frac{2}{2}$ (c) $\frac{\left|A\_{x}\right|}{\left|A\right|}= \frac{2}{4}$ (d) $\frac{\left|A\_{x}\right|}{\left|A\right|}= \frac{4}{2}$

1. If $\frac{1}{x}-\frac{1}{x+4}=\frac{1}{3} $ the values for $x$ is equal to

 (a) $\left\{-2,6\right\}$ (b) $\left\{-2,-6\right\}$ (c) $\left\{2,-6\right\}$ (d) $\left\{2,6\right\}$

1. If $2x^{2}+6x-\frac{7}{2}=0$, then the values for $x $is equal to:

(a) $\left\{-\frac{1}{2},-\frac{7}{2}\right\}$ (b) $\left\{-\frac{7}{2},\frac{1}{2}\right\}$ (c) $\left\{\frac{7}{2},-\frac{1}{2}\right\}$ (d) $\left\{\frac{1}{2},\frac{7}{2}\right\}$

1. The number of solutions of the system $-7x+3y=1$ and $\frac{7}{3}x-y=\frac{1}{3} ,$ is

 (a) $0$ (b) $ 1$ (c) $2$ (d) infinitely many

1. Simplification of the fraction $\frac{x^{2}+7x+10}{x^{3}+5x^{2}+4x+20}$ is

 (a) $\frac{1}{x+2}$ (b) $\frac{1}{x-2}$ (c) $\frac{x+2}{x^{2}+4}$ (d) $-\frac{1}{x+2}$

1. Simplification of the complex fraction $\frac{x^{2}+3x-10}{x^{2}+x-6}÷\frac{x^{2}-x-30}{x^{2}-9x+18}$ is

 (a) $\frac{x-3}{3-x}$ (b) $\frac{3-x}{x+3}$ (c) $\frac{x+3}{x-3}$ (d) $\frac{x-3}{x+3}$

1. The partial fractions decomposition of $\frac{3 + 6x + 4x^{2} - 2x^{3}}{x^{2 }\left(x^{2}+ 9\right)}$ is

 (a) $\frac{ax+b}{x^{2}}+\frac{cx+d}{\left(x^{2}+9\right)}$ (b) $\frac{ax}{x^{2}}+\frac{cx+d}{\left(x^{2}+9\right)}$ (c) $\frac{a}{x}+\frac{b}{x}+\frac{cx+d}{\left(x^{2}+9\right)}$ (d) $\frac{ax+b}{x^{2}}+\frac{b}{\left(x+3\right)}+\frac{c}{\left(x-3\right)}$

1. The solution of the equation $4-2\left(x^{2}+1\right)^{2}=-46$ is

 (a) $\left\{4\right\}$ (b) $\left\{-2,2\right\}$ (c) $\left\{4,-6\right\}$ (d) $\left\{-6\right\}$

1. The solution of the linear equations $\frac{2x}{3}-\frac{y}{2}=-\frac{1}{6}$ and $\frac{x}{2}+\frac{2y}{3}=-\frac{7}{6}$ is

(a) $\left(-1,1\right)$ (b) $\left(1,-1\right)$ (c) $\left(-1,-1\right)$ (d) $\left(1,1\right)$

1. $a^{4}-a^{2}b-12b^{2}$ is equal to

 (a) $\left(a^{2}-3b\right)\left(a^{2}+4b\right)$ (b) $\left(a^{2}+3b\right)\left(a^{2}-4b\right)$

 (c) $\left(a^{2}-3b\right)\left(a^{2}-4b\right)$ (d) $\left(a^{2}+3b\right)\left(a^{2}+4b\right)$