I.E.S. BLANCO AMOR DTO MATEMÁTICAS

NOME……..GRUPO……DATA……

OPERACIONES CON RACIONALES

1-Lee, simplifica en lo posible y calcula:

$$a)\ \frac{\frac{20}{21}\cdot\frac{14}{5}-\frac{2}{3}\div\frac{4}{9}+2\cdot\left(1+\frac{1}{2}\right)}{1+\frac{1}{1+\frac{1}{2}}}=$$

$$b)\ \frac{2\cdot\left(\frac{3}{4}-\frac{5}{2}\right)\div\frac{2}{3}\cdot\left(\frac{4}{5}+1\right)}{\left[1-2\cdot\left(1+\frac{1}{4}\right)\right]\cdot\left(1-\frac{1}{2}\right)}=$$

$$c)\ \frac{\left[\left(\frac{1}{3}\div\frac{2}{7}\right)+\frac{1}{4}\right]\cdot\left(-\frac{2}{3}\right)-1}{-1+\left(-\frac{3}{5}\right)\div\left(-\frac{1}{4}\right)}=$$

$$d)\ \frac{\frac{3}{4}\div\frac{5}{8}-\frac{3}{2}\cdot\left(1-\frac{1}{3}\right)+2}{\frac{1}{4}\cdot\frac{4}{5}+\frac{3}{5}\div\frac{3}{10}}=$$

$$e)\ \frac{\left(\frac{3}{4}-\frac{1}{2}\right)\div\frac{4}{3}+1}{\frac{1}{2}-\frac{3}{4}+\frac{5}{8}}=$$

$$f)\ \frac{\frac{1}{5}+2\cdot\left(\frac{1}{4}-2\right)-\left(1-\frac{1}{3}\right)}{\left(\frac{1}{5}\cdot\frac{2}{3}-\frac{2}{3}\right)\cdot\frac{1}{4}}=$$

$$g)\ \frac{3+\frac{1}{2}\cdot\frac{4}{3}+2\cdot\left(1+\frac{3}{2}\right)}{2+\frac{3}{4}}\div 2+\frac{1}{2}=$$

$$h)\ \frac{\frac{2}{5}-3\div\frac{6}{5}}{\frac{5}{6}\div\left(\frac{3}{4}-5\right)-\frac{5}{6}}=$$

$$i)\ \frac{\frac{7}{5}\div\left(3-\frac{7}{10}\right)}{\left(4-\frac{4}{5}\right)\cdot\left(1+\frac{7}{8}\right)}=$$

$$j)\ \frac{3+\frac{1}{4}}{2\div\frac{3}{5}}-\frac{\frac{5}{2}-1}{\frac{3}{2}\cdot 4}=$$

$$k)\ \frac{\left(\frac{3}{2}+\frac{4}{3}\right)\cdot 2+\frac{3}{5}\div\frac{3}{2}}{\frac{4}{3}+2\div 2}=$$

$$l)\ \frac{3-\frac{11}{5}}{\frac{2}{3}\div\frac{3}{2}}+\frac{\frac{2}{3}\div 4}{\frac{15}{4}-4}=$$

$$m)\ \frac{1+\frac{2-\frac{1}{4}}{3-\frac{1}{2-\frac{1}{2}}}}{\left[\left(-\frac{1}{4}\right)-\left(-\frac{2}{5}\right)\cdot\frac{1}{6}\right]\div\frac{2}{3}}=$$

$$n)\left[\left(\frac{1}{2}+\frac{2}{3}\right)\cdot\frac{1}{4}-2\cdot\left(-\frac{1}{4}+\frac{2}{3}\right)\right]\div\left(\frac{5}{6}-4+\frac{1}{4}\right)=$$

2-Fíjate bien y resuelve, simplificando siempre que sea posible:

$$a)\left[\frac{3}{2}\cdot\left(3-\frac{2}{3}\right)^2-\frac{2}{3}\cdot\left(2-\frac{3}{2}\right)^2\right]^2=$$

$$b)\left[\frac{2}{5}\cdot\frac{1}{3}\cdot\left(\frac{21}{6}+\frac{3}{2}\right)\right]^5\div\left[\frac{1}{3}+\frac{2}{3}\cdot\left(\frac{1}{3}+\frac{1}{6}\right)\right]^5=$$

$$c)\left[2+\frac{1}{2}\cdot\left[4^2-\frac{2}{3}\cdot\left(3^2+3\right)\right]^2\right]^{-1}\cdot\left(\frac{1}{2}-\frac{1}{3}\right)^{-2}=$$

$$d)\left[\frac{1}{2}+\left(\frac{2}{3}\right)^{-1}\right]^5\cdot\left(\frac{1}{\frac{5}{2}-1}\right)^5\cdot\left(1-\frac{1}{4}\right)^5=$$

$$e)\left(\frac{3+\frac{1}{2}-\frac{2}{3}}{2+\frac{2}{3}-\frac{2}{5}}\right)^2+\frac{5}{8}\div\left(2-\frac{3}{2}\right)^4=$$

$$f)\left(\frac{1}{2}-\frac{3}{4}\right)^3-\frac{5+\left(\frac{3}{2}\right)^2}{4-\left(\frac{2}{3}\right)^2}=$$

$$g)\frac{\frac{2}{3}-\left(\frac{3}{2}\right)^2}{\frac{2}{3}+\frac{3}{2}-1}-\frac{1+\frac{3}{2}+\frac{9}{4}}{\left(\frac{2}{3}\right)^2+\frac{9}{4}}=$$

$$h)-1+\frac{2}{3}\left[-\frac{1}{4}-3\cdot\left(-\frac{1}{9}+6\right)+\frac{2}{5}\right]+\frac{1}{7}\cdot\left[-\frac{2}{3}\cdot\left(-\frac{1}{3}+2\right)\right]=$$