Problems13-14. Time limit 10 minutes.

13. Define operation * by $a*b=2ab+1$ Evaluate $(2*4)*3$.

14. In ΔABD, C is on side $\overline{BD}$. If $m\angle B=(2x)°, m\angle BAC=(x+1)°, m\angle ACD=(4x-22)°$ and $\angle D \cong \angle CAD$, find the degree measure of $\angle BAD$

Problems15-16. 10 minutes.

15. (a classic) Find the sum of the coefficients in the expansion of $(2x+y)^{10}$

16. PARL is a parallelogram. Point G is on side $\overline{LR}$, so that $\overline{PG}$ bisects $\angle LPA$ and $\overline{AG}$ bisects $\angle PAR$. Find the ratio PL:LR.

Problems 17-18. 11 minutes.

17. Find the minimum possible value for $|2x-1|+|x-2|$

18. When $\frac{52}{23}$ is written in the form $A+\cfrac{1}{B+\cfrac{1}{C+\cfrac{1}{D}}}$, find the ordered quadruple of positive integers

(A,B,C,D)
