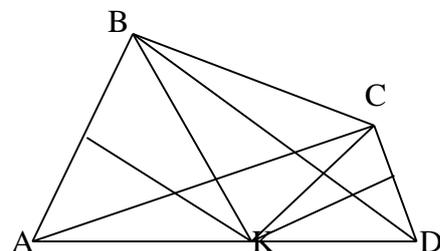


8

1. $\frac{n^2 + 2n + 15}{n + 1} = n + 1 + \frac{14}{n + 1}$,
 (n+1). , n = 13. 14
 : 13.

2. 4 , 10
 4. - 13, - 11 12,
 10+13+3·12=59. , 10+13+3·11=56, 56 4,
 $\frac{56}{4} = 14$.
 : 14.

3. K - .
 $AK=KB, CK=KD \quad \angle KBA = \angle BAK = \angle KDC = \angle KCD$.
 $\angle AKB = \angle CKD, \angle AKC = \angle BKD$. $\Delta AKC = \Delta BKD$ (
) $BD=AC$ (
).



4. , - ,
 . , - .
 (, -). ,
 , ... - .
 , , - « ».

: « ».

5.

$$\begin{aligned}
 & a^{2n} = x^2 + y^2 + 2xy = a^m + 2xy. & a^{2n} > a^m, \\
 & , a^{2n} & a^m. & , 2xy & a^m = x^2 + y^2. \\
 & , & 2xy & x^2 + y^2 & 2xy. & x^2 + y^2 = 2xy, x = y. \\
 & , 2x = a^n, 2x^2 = a^m, & 4x^2 = a^{2n}, 2 = a^{2n-m}. & , \\
 & a=2, x=y=2^k, & k \geq 0.
 \end{aligned}$$

: $(2^k, 2^k)$, $k \geq 0$.