$$\det \text{ar}\left(\nabla^T f(t), \nabla^T f(s), \nabla^T f(r) \right)$$

$$= \det \text{ar}\left(\nabla^T f(t), \nabla^2 f(t)(s-t)^T + \cancel{\nabla^T f(t)}^{+z_1}, \right.$$
$$\left. \nabla^2 f(t)(r-t)^T + z_2 \right)$$

$$= \det \text{ar}\left(\nabla^T f(t), \nabla^2 f(t)(r-t)^T + \nabla^2 f(t)\underset{s-t}{(r-t)}^T \right.$$
$$\nabla^2 f(t)(r-t)^T$$

qq is $\det \text{ar}\left(A^T, (B+C)^T, (B+D)^T \right)^T$

$$= \det \text{ar}\left(A^T, (B+C)^T, D^T \right)^T \ ?$$

$\det \text{ar}(1, 1, 1) \quad \times \qquad\qquad\qquad Y$

U	$\text{ar } U$	$\text{ar}(u,v) + \text{ar}(u)$) A
$U+V$	ar	$\text{ar}(u) + \text{ar}(v) + \text{ar}(u,v)$) B

U	$\text{ar } U$	$\text{ar}(u,v)$	subtract
V	$\text{ar}(u,v)$	$\text{ar}(v)$	A from B. and then X from Y gives the result!