18. What is the greatest number of the following five statements about numbers a, b which can be true at the same time?

$\frac{1}{a} < \frac{1}{b}$ $a^2 > b^2$ $a < b$ $a < 0$ $b < 0$

A 1   B 2   C 3   D 4   E 5

18. **D** It is not possible for all five statements to be true at the same time since if $a < b, a < 0$, $b < 0$ are all true then $\frac{1}{a} < \frac{1}{b}$ is not true since $\frac{1}{b} - \frac{1}{a} = \frac{a-b}{ab}$ which is negative. However, when these three statements are true, $a^2 > b^2$ is also true, so it is possible for four of the statements to be true at the same time.