

For the following pairs of expressions, can you work out when each expression is bigger?

$n + 10$ and $2n + 3$	$5n - 2$ and $3n + 2$
$2n + 7$ and $4n + 11$	$2(n + 4)$ and $3n + 8$
$2(3n + 4)$ and $3(2n + 4)$	$2(3n + 3)$ and $3(2n + 2)$

Here are some challenges to try:

Find two expressions so that one is bigger whenever $n < 5$ and the other is bigger whenever $n > 5$.

Find three expressions so that the first is biggest whenever $n < 0$, the second is biggest whenever n is between 0 and 4, and the third is biggest whenever $n > 4$.

Find three expressions so that the first is biggest whenever $n < 3$, the second is biggest when $n > 3$, and the third is never the biggest.

Find three expressions so that one of them is the biggest regardless of the value of n .