A New Operation

Everybody knows how to $+, -, \times, \div$, but do you know how to $\star$? Follow these examples: $10 \star 8 = 10 + 8 - 3 = 15$ and $4 \star 5 = 4 + 5 - 3 = 6$. Now you try:

(**1**) $6 \star 6 =$

(**2**) $2 \star 7 =$

Can you find a number $\square$ so that $1 \star \square = 1$?
(**3**) $\square =$

Does that same number make $4 \star \square = 4$?
(**4**) Answer:

Now what happens if we try to find some number $\bigcirc$ so that $1 \star \bigcirc = \square$?

(**5**) $\bigcirc =$?

Now what happens if we try to find some other number $\triangle$ so that $4 \star \triangle = \square$?

(**6**) $\triangle =$?

Do you see a pattern? If you have some number n (a variable), how can you figure out what number $\diamond$ makes it so that $n \star \diamond = \square$?