LaTex Help by Example

The "LaTex Help by Example" items will help you LaTexing your homework. If you have to do something similar when your LaTexing your homework, just compare the Example LaTex code to the complied output.

How to align (long) displayed formualas.

The below math is a slight modification to the proof of Theorem 1.8. The third method (called 3.) is recommended; the first 2 methods slowly work us up to the recommended (third) method.

<u>1. Aligning a formula without tagging</u>. This way aligns but does not *tag* the formula. Recall the * says *do not create a tag*. The & sign tells TeX where the alignment is to be. To start a new line just use a double blackslash.

Using algebra, we obtain

$$x \cdot y = (2m+1)(2n+1)$$

= 4mn + 2m + 2n + 1
= 2(2mn + m + n) + 1
= 2q + 1

where q = 2mn + m + n.

2. Aligning a formula with tagging. Now we will tag (i.e., number) the formula.

Using algebra, we obtain

$$x \cdot y = (2m+1)(2n+1)$$

= 4mn + 2m + 2n + 1
= 2 (2mn + m + n) + 1
= 2q + 1
(1)

where q = 2mn + m + n.

3. Aligning a formula with tagging and labeling. Now we will tag (i.e., number) the formula as well as *label* it as so to refer back to it later.

Using algebra, we obtain

$$x \cdot y = (2m+1)(2n+1)$$

= 4mn + 2m + 2n + 1
= 2 (2mn + m + n) + 1
= 2a + 1
(2)

where q = 2mn + m + n. It follows from (2) that (you can keep going ... the *eqref* helps us automatically refer to the formula that we want the reader to be looking at).