

Some Examples of wff and malformed formulas

1. $P \vee Q \vee S$

It's missing some brackets.

2. $P \vee (Q \vee S)$

OK.

3. $(P \vee Q) \vee S$

OK. Notice how the positioning of the brackets differ between this and the previous sentence. So this and the previous are distinct sentences.

4. $[(T \vee Z) \vee W] \vee \neg[T \wedge (S \wedge W)]$

OK.

5. $(T \vee Z) \vee W] \vee \neg[T \wedge (S \wedge W)]$

Notice some brackets went missing.

6. $[(Y \vee Q) \wedge (L \vee Q)] \wedge (Y \wedge L)$

OK.

7. $[(\vee Q) \vee (Y \wedge S)] \wedge (W \wedge S)$

Look at the first \vee .

8. $[(R \vee P) \vee (S \wedge Q)] \wedge \{R \vee [\neg S \vee (L \vee R)]\}$

OK.

9. $[W \wedge (P \vee Q)] \wedge Q \vee (Z \wedge P)$

Missing some brackets. This would work:

$$\{[W \wedge (P \vee Q)] \wedge Q\} \vee (Z \wedge P)$$

also

$$[W \wedge (P \vee Q)] \wedge [Q \vee (Z \wedge P)]$$

10. $[(P \wedge S) \vee R] \wedge R$

The first opening brackets has no matching closing bracket.

11. $M \vee M$

OK.

$$12. \neg\neg S \vee [(Z \vee T) \vee \neg P]$$

OK.

$$13. \{[(Z \vee Q) \wedge PP] \wedge R\} \wedge [(Q \vee Z) \wedge R]$$

Notice PP has two sentences next to each other.

$$14. [(Y \vee L) \wedge R] \vee [(Y \wedge L) \vee]$$

Look at the last \vee .

$$15. \neg(Z \vee Q) \wedge [Y(T \wedge P)]$$

Look at Y .

$$16. (S \wedge Q) \vee \neg S$$

OK.

$$17. [L \wedge (Q \vee M)] \vee \{[\{\vee (Y \wedge Y)\} \wedge (M \vee L)]\}$$

It has some extra brackets.