

# Differences between second and third editions of Preparatory Problems for IChO 2019

Several mistakes were corrected. This list is not exhaustive. Nevertheless, those that can influence the resolution of problems are listed below.

Differences between first and second editions are gathered on the next page.

Physical constants and equations:

The formula for  $M_w$  was corrected.

Problem 3:

Formulation of question 2 and 3 is now more accurate.

Problem 7, question 7:

The first proposition was modified.

Problem 17, table before question 8:

Some  $\eta$  values were corrected.

Problem 21, graph before question 6:

The  $x$ -values were corrected.

# Differences between first and second editions of Preparatory Problems for IChO 2019

Several mistakes were corrected. This list is not exhaustive. Nevertheless, those that can influence the resolution of problems are listed below.

Physical constants and equations:

The formula for  $M_w$  was corrected.

Problem 3, data:

Standard enthalpy of formation of cyclohexane at 298 K was modified

Problem 4, section *The liquid methanol cell*

The first sentence was modified

Problem 10, question 6:

The answer to question 3 was given, and has now been removed.

Problem 11, before question 3:

The concentration of the acidic solution of  $\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2$  is  $0.100 \text{ mol L}^{-1}$ .

Problem 12:

$v$  and  $r$  were used as an abbreviation for the rate.  $r$  is now the sole abbreviation used.

Question 11: The experiment D (and not E) is needed to answer this question.

Problem 13:

The stoichiometric number of  $\text{H}_2$  in the synthesis has been corrected.

Problem 14:

Question 2: Missing carbons were added in the scheme.

Question 15: The formula of one reactant of the final step was modified.

Problem 17, question 4:

The variables to be used are  $N_A$ ,  $N_B$ ,  $n_{EA}$ , and  $n_{EB}$ .

Problem 19, question 1:

A + charge was added in the scheme (on the O atom in the middle of the scheme).

Problem 20, question 15:

Fluorine was replaced by fluoride in the question.

Problem 21:

The X-ray structure was corrected and a picture has been enhanced.

Back to 1990, question 5:

The unit of the amount of copper was corrected.

Practical problem 5, step 2:

A minor correction was made to the needed glassware.

Practical problem 6:

A chemical was modified.

Step 4: the solutions to be prepared were modified.