

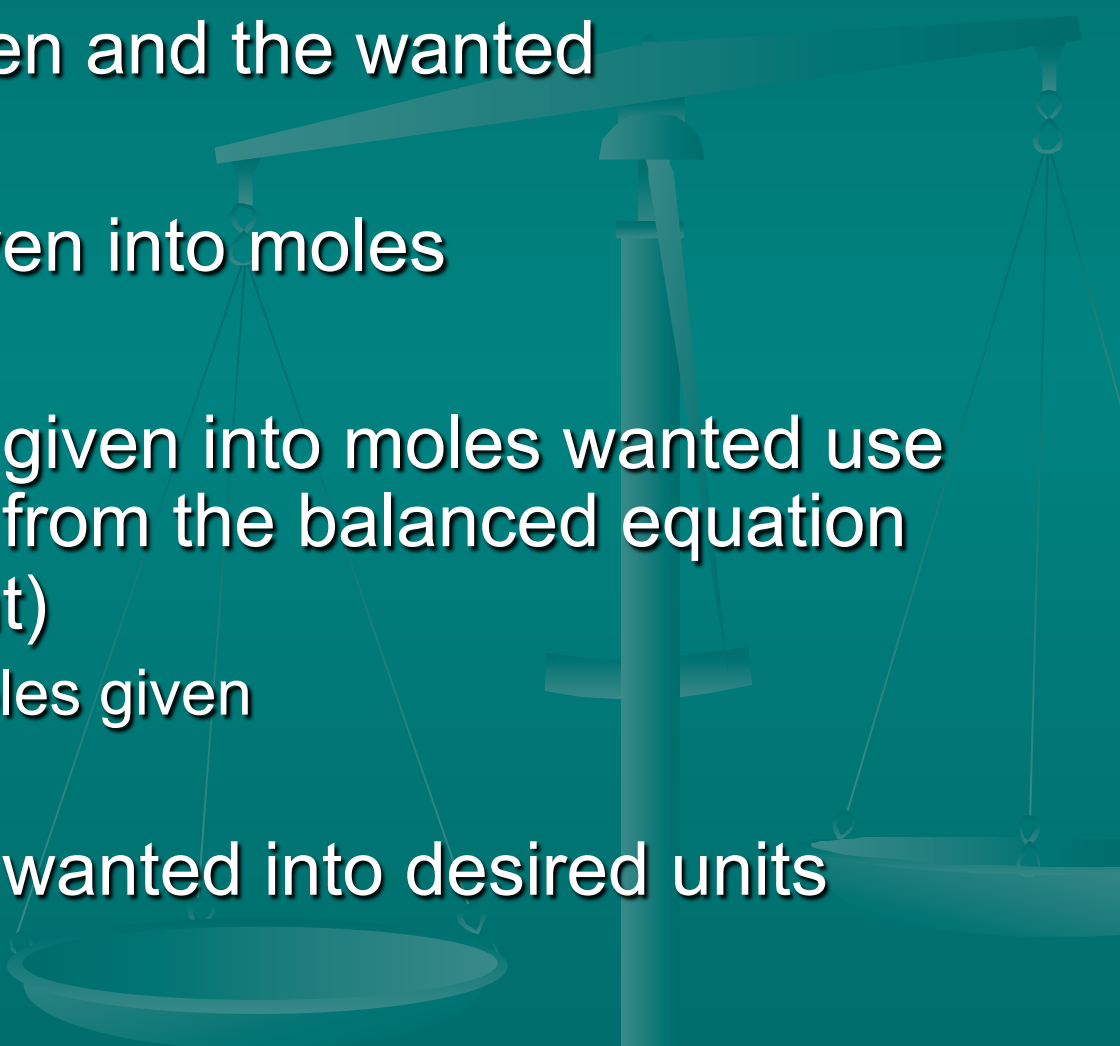
Stoichiometry

A faint, light-colored illustration of a balance scale is visible in the background, centered behind the text. The scale has two pans hanging from a horizontal beam, and a vertical column supporting the beam. The entire scene is set against a solid teal background.

Chemical Mathematics

Chapter 9

5 step problems

- 1. Write a balanced chemical equation
 - 2. Identify the given and the wanted
 - 3. Convert the given into moles
 - 4. Change moles given into moles wanted use the MOLE RATIO from the balanced equation (use the coefficient)
 - Moles wanted /moles given
 - 5. Convert moles wanted into desired units
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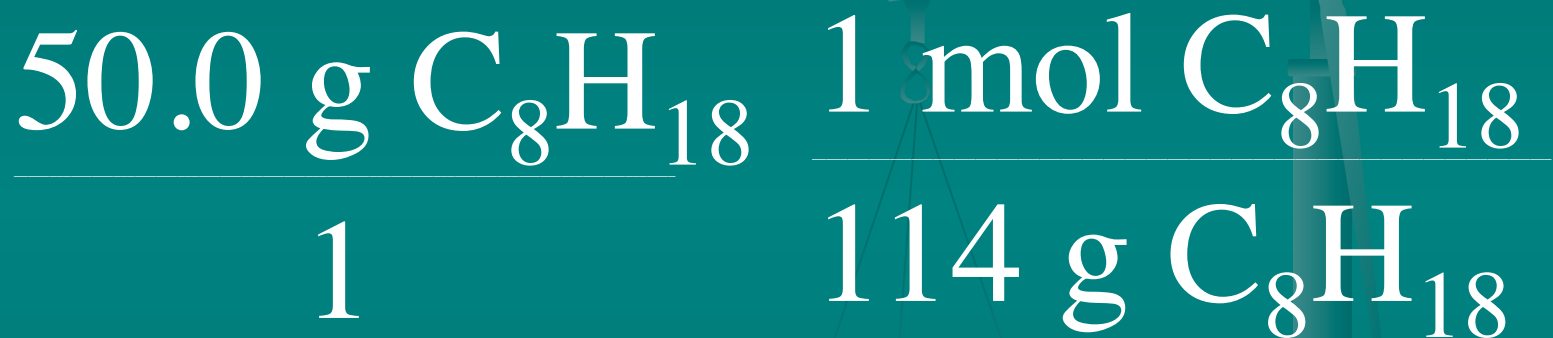
Example step 1 & 2

How many grams of CO_2 will be produced from the combustion of 50.0 grams of Octane (C_8H_{18})?

Balanced equation



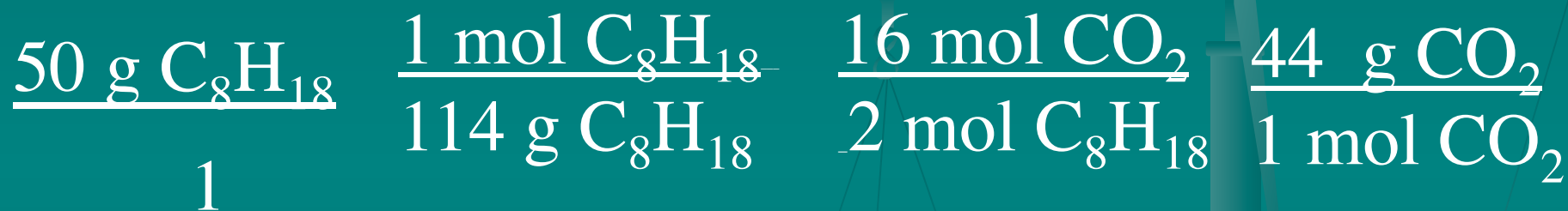
Example step 3



Example step 4



Example step 5

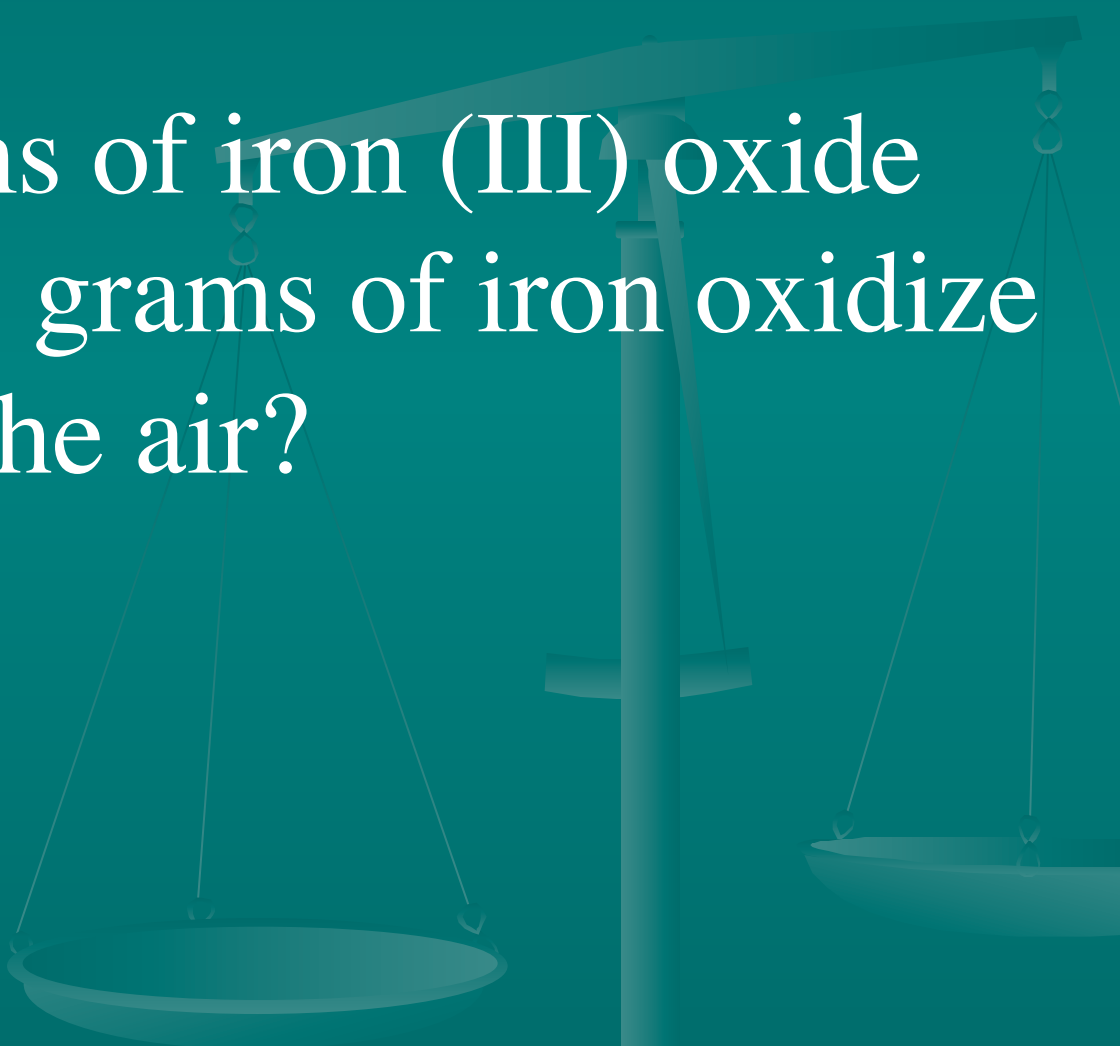


154 g CO₂



Your turn

How many grams of iron (III) oxide will form if 10.5 grams of iron oxidize with oxygen in the air?



Book reference

- Chapter nine
- Homework questions 9 - 12
 - pages 244 & 245

