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CH 301 DISCUSSION SECTION CAC 01/31/22

PRACTICE PROBLEM PACKAGE PG. 41

UNIT 1 / PART 1

1. 40g of A (60g/mol) + 35g of B (40g/mol) → C (37g/mol) + D (75g/mol)

$3A + 2B \rightarrow 5C + 1D$

$\frac{40g}{60g} = 0.67\,mol$, $\frac{35g}{40g} = 0.875\,mol$

(A) B C D

2. FOR THE REACTION #1, WHAT IS THE MAX # OF g's OF D THAT CAN BE PRODUCED?

$2/3\,mol\ A\left(\frac{1\,mol\ D}{3\,mol\ A}\right)\cdot\left(\frac{75g\ D}{1\,mol\ D}\right) = 16.67g\ D$

ANSWER: 16.67g D

3. FOR THE REACTION #1, HOW MANY g's OF EXCESS REACTANT ARE LEFT OVER AT THE COMPLETION OF THE REACTION? 17.4g of B

$16.67g\ D \left|\frac{1\,mol\ D}{75g\ D}\right| \left|\frac{2\,mol\ B}{1\,mol\ D}\right| \left|\frac{40g\ B}{1\,mol\ B}\right| = 17.76g$ $35 - 17.78 = 17.22g$ of B

17.22g of B

ANSWER: [redacted]

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