

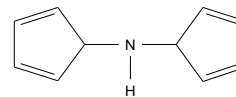
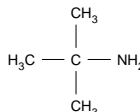
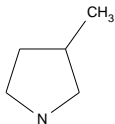
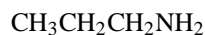
H				He
C	N	O	F	Ne
Si	P	S	Cl	Ar

Name: _____

CHEM 20482 - Basic Organic Chemistry II - Spring 2009

Quiz #6 - 0 Points

1. Classify each of the following amines as 1°, 2°, or 3°.



2. All three of the amines shown are isomers, and as such have identical molecular weights. Match the boiling points listed with the corresponding amines and explain the trend observed.

b.p. = 3°C, 34°C, 50°C

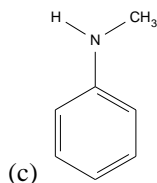
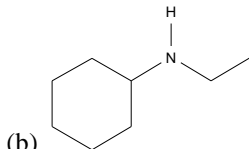
(CH₃)₃N

CH₃CH₂CH₂NH₂

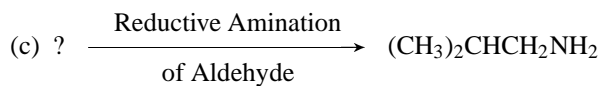
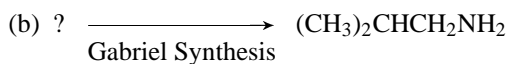
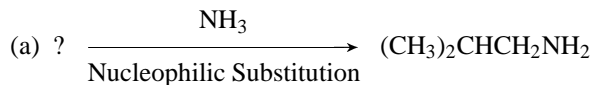
CH₃CH₂NHCH₃

3. Name each of the following amines

(a) (CH₃)₂CHCH₂NH₂



4. Give the reactants and reaction conditions necessary to synthesize each of the following amines by the synthetic route indicated.



CHEM 20482 - Basic Organic Chemistry II - Spring 2009 Quiz #6 Key

- Classify amines: From left to right = 1°, 2°, 1°, and 2°.
- Boiling point trend.

Lowest b.p. $(\text{CH}_3)_3\text{N}$ 3°C No H-bonding	$\text{CH}_3\text{CH}_2\text{NHCH}_3$ 34°C 1 N-H donor	Highest b.p. $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$ 50°C 2 N-H donors
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- Naming amines.
 - 2-methylpropanamine or isobutylamine
 - N*-ethylcyclohexanamine
 - N*-methylaniline
- Give the reactants and reaction conditions.
 - $(\text{CH}_3)_2\text{CHCH}_2\text{X} \xrightarrow{\text{NH}_3} (\text{CH}_3)_2\text{CHCH}_2\text{NH}_2$

