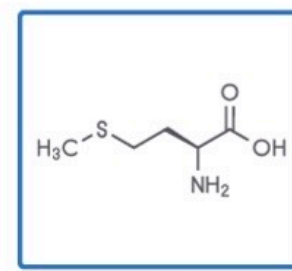
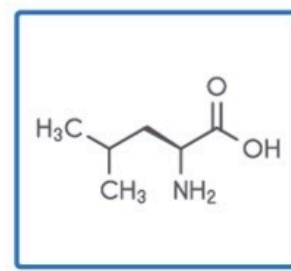
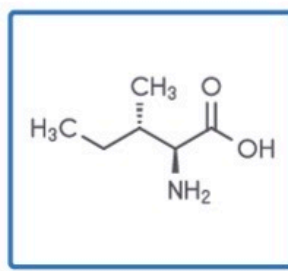
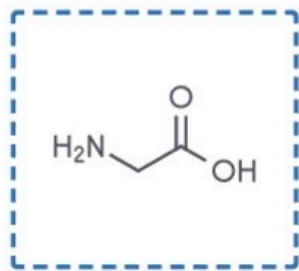
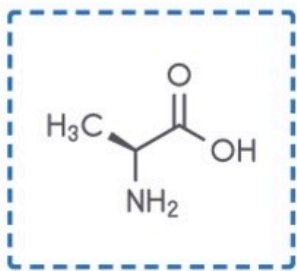
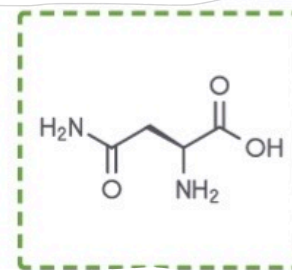
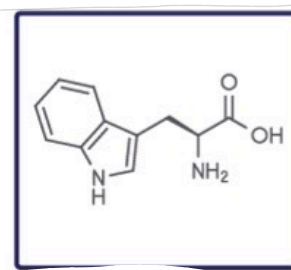
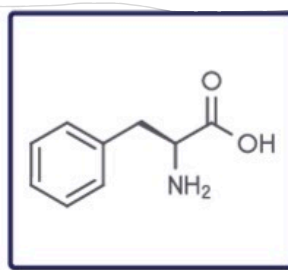
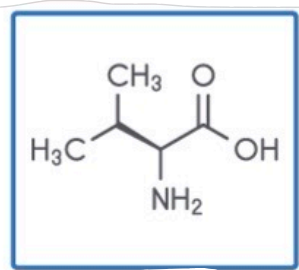
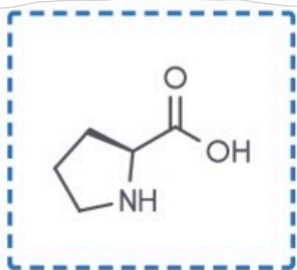


- Amino acids practice sheet -

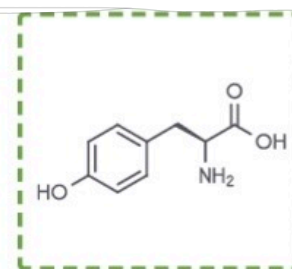
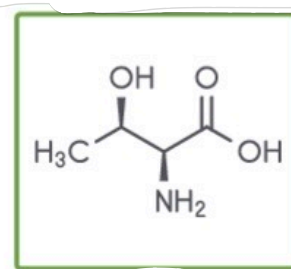
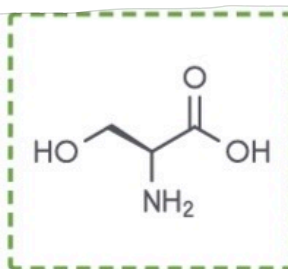
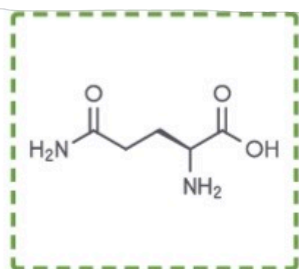
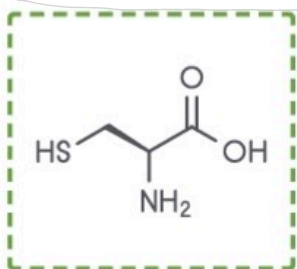
wish you a full mark ★



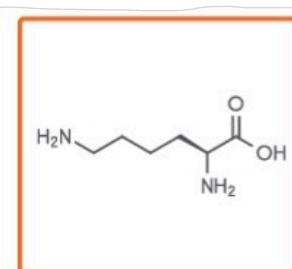
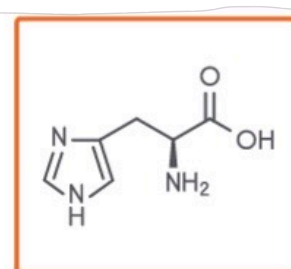
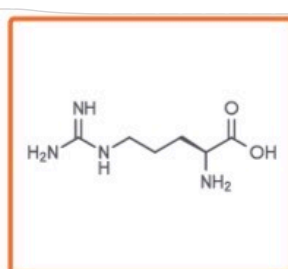
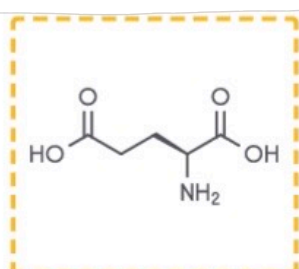
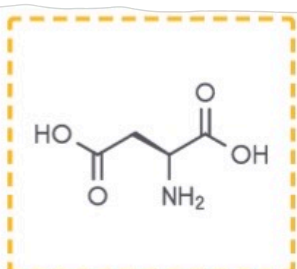
a.c



a.c



a.c



a.c

AMINO ACID PRACTICE WORKSHEET

Fill in the abbreviations, properties, and draw the chemical structure for each amino acid.

Alanine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Arginine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Asparagine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Aspartic Acid

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Cysteine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Glutamic Acid

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Glutamine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Glycine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Histidine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Isoleucine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Leucine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Lysine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Methionine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Phenylalanine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Proline

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Serine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Threonine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Tryptophan

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR, _____)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Tyrosine

3-LETTER ABBR.

1-LETTER ABBR.

CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

CHEMICAL STRUCTURE

Draw Structure Here

Valine

3-LETTER ABBR.

1-LETTER ABBR.

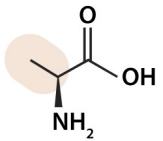
CLASSIFICATION (E.G., POLAR,)

ESSENTIALITY (ESSENTIAL/NON)

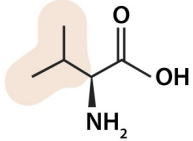
CHEMICAL STRUCTURE

Draw Structure Here

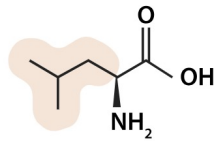
Non-polar side chains, uncharged, hydrophobic



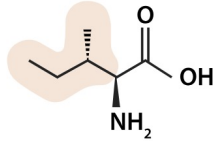
Alanine (Ala, A)
MW: 89,09
pI: 6,01
C₃H₇N₁O₂



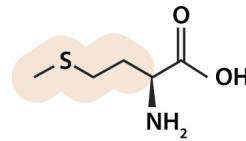
Valine (Val, V)
MW: 117,15
pI: 6,00
C₅H₁₁N₁O₂



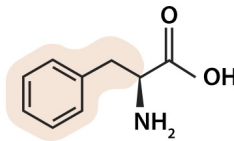
Leucine (Leu, L)
MW: 131,17
pI: 6,01
C₆H₁₃N₁O₂



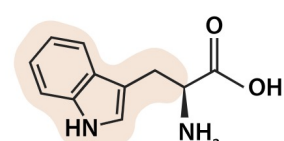
Isoleucine (Ile, I)
MW: 131,17
pI: 6,05
C₆H₁₃N₁O₂



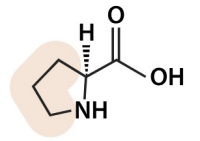
Methionine (Met, M)
MW: 149,21
pI: 5,74
C₅H₁₁N₁O₂S₁



Phenylalanine (Phe, F)
MW: 165,19
pI: 5,49
C₉H₁₁N₁O₂



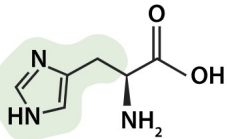
Tryptophan (Trp, W)
MW: 204,23
pI: 5,89
C₁₁H₁₂N₂O₂



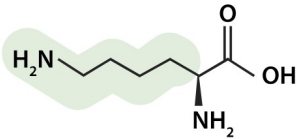
Proline (Pro, P)
MW: 115,13
pI: 6,30
C₅H₉N₁O₂

Electrically charged side chains

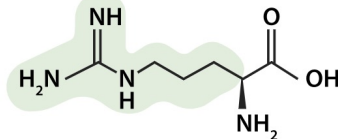
Basic



Histidine (His, H)
MW: 155,16
pI: 7,60
C₆H₉N₃O₂

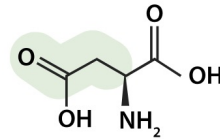


Lysine (Lys, K)
MW: 146,19
pI: 9,60
C₆H₁₄N₂O₂

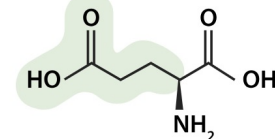


Arginine (Arg, R)
MW: 174,20
pI: 10,76
C₆H₁₄N₄O₂

Acidic

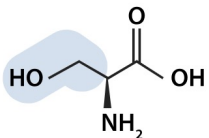


Aspartic Acid (Asp, D)
MW: 133,1
pI: 2,85
C₄H₇N₁O₄

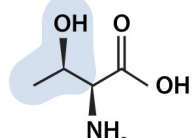


Glutamic Acid (Glu, E)
MW: 147,13
pI: 3,15
C₅H₉N₁O₄

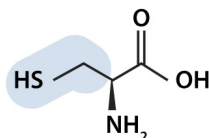
Polar side chains, uncharged



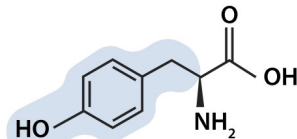
Serine (Ser, S)
MW: 105,09
pI: 5,68
C₃H₇N₁O₃



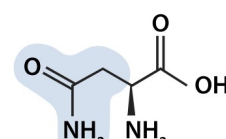
Threonine (Thr, T)
MW: 119,12
pI: 5,60
C₄H₉N₁O₃



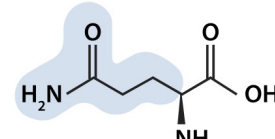
Cysteine (Cys, C)
MW: 121,16
pI: 5,05
C₃H₇N₁O₂S₁



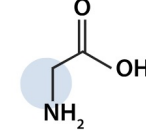
Tyrosine (Tyr, Y)
MW: 181,19
pI: 5,64
C₉H₁₁N₁O₃



Asparagine (Asn, N)
MW: 132,12
pI: 5,41
C₄H₈N₂O₃



Glutamine (Gln, Q)
MW: 146,15
pI: 5,65
C₅H₁₀N₂O₃



Glycine (Gly, G)
MW: 75,07
pI: 6,06
C₂H₅N₁O₂