I. Write key signatures for each of the following keys. Be sure to pay attention to the clefs.

\[ \text{e minor} \quad \text{G-flat major} \quad \text{f\# minor} \]

\[ \text{B major} \quad \text{b-flat minor} \quad \text{C\# major} \]

II. Notate the following scales. The first two scales should be notated in ascending direction. The last two scales should be notated in descending direction. For all scales, use accidentals, not key signatures.

A-flat major (ascending)

\[ \text{c\# melodic minor (ascending)} \]

F\# major (descending)

\[ \text{f melodic minor (descending)} \]
III. You are provided with a pitch and a scale degree function for that pitch; identify the key that contains the specified scale degree.

\[
\begin{bmatrix}
\text{\#5} & \text{\#3} & \text{\#6} & \text{\#6} \\
\end{bmatrix}
\]

\( \text{Major} \quad \text{natural minor} \quad \text{Major} \quad \text{melodic minor (asc.)} \)

\[
\begin{bmatrix}
\text{\#6} & \text{\#3} & \text{\#6} & \text{\#7} \\
\end{bmatrix}
\]

\( \text{harmonic minor} \quad \text{Major} \quad \text{melodic minor (desc.)} \quad \text{harmonic minor} \)

pts. out of 12 __________

(1.5 pts. each)

IV. INTERVALS: Notate the following intervals above or below the given pitch as indicated.

(P = perfect; M = Major; lower-case m = minor; A = augmented; d = diminished)

\[
\begin{bmatrix}
\text{M3 below} & \text{m6 above} & \text{P5 above} & \text{d5 below} & \text{m3 above} \\
\end{bmatrix}
\]

Name the intervals, showing quality and number (for instance, P5)

pts. out of 15 __________

(1.5 pts. each)
V. TRIADS: Write the following triads in root position or inversion, as specified.

\[ \text{c\# minor, root position} \quad \text{B Major, second inversion} \quad \text{Eb Aug, first inversion} \]

\[ \text{F dim, first inversion} \quad \text{d minor, second inversion} \quad \text{Ab major, first inversion} \]

VI. SEVENTH CHORDS: Write root-position seventh chords above the given roots in close spacing.

\[ \text{Major-minor seventh chord} \quad \text{half-diminished seventh chord} \quad \text{major seventh chord} \]

\[ \text{minor seventh chord} \quad \text{diminished seventh chord} \quad \text{Major-minor seventh chord} \]

pts. out of 12 ____
(2 pts. each)

pts. out of 9 _____
(1.5 pts. each)
VII. CHORDS IN OPEN SCORE: The following shows triads in open score. For each chord, indicate (1) the pitch that is the root of the chord; (2) the quality of the triad (M, m, d, or A); and (3) whether the chord is in root position, 1st inversion, or 2nd inversion (simply write "root", "1st", or "2nd").

![Sample chord diagram](image)

root? A♭ ___ ___ ___ ___ ___ ___
quality? m ___ ___ ___ ___ ___ ___
root, 1st, 1st ___ ___ ___ ___ ___ ___
or 2nd? 2nd ___ ___ ___ ___ ___ ___

pts. out of 15 ___
(1 pt. each)

VIII. ROMAN NUMERALS: Given the key and chord, provide a roman numeral label underneath. Be sure to indicate chord quality, and include an inversion symbol if necessary (⁵ or Ⅵ)

d: ___ A: ___ B♭: ___

pts. out of 12 ___
(2 pts. each)