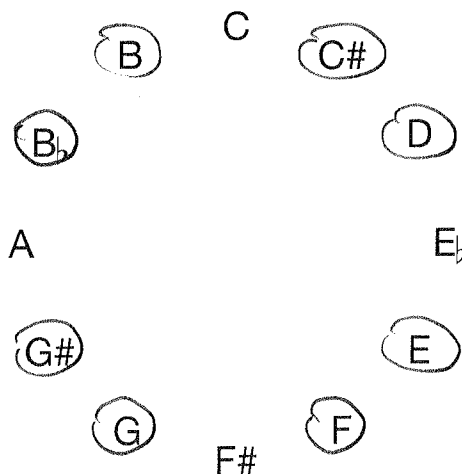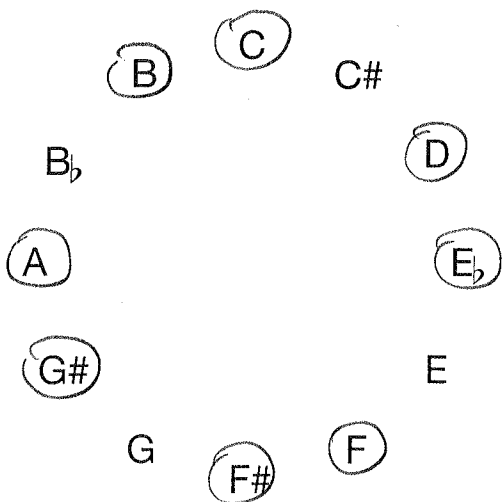Notate the pitch-class collections in mm. 1–4 and mm. 12–18 on the following clock faces.
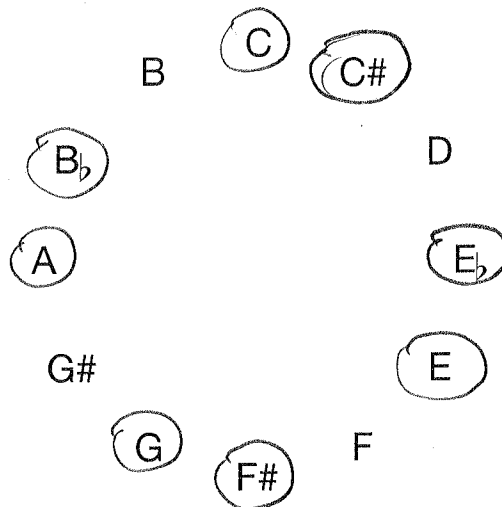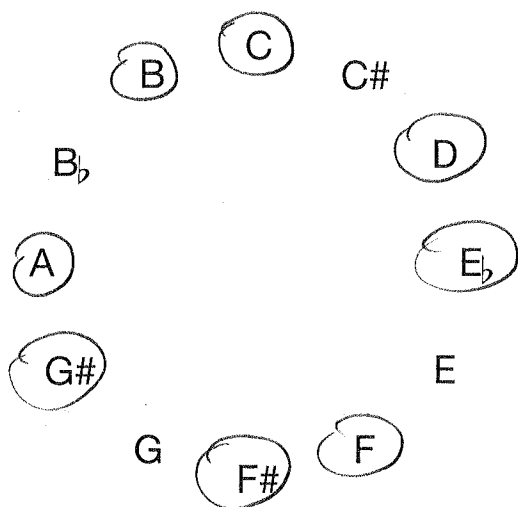


What transposition operation(s) can transform the mm. 1–4 collection into the mm. 12–18 collection? (In other words, by how many half-steps do you transpose the former to get the latter.) Notate your answer(s) as $Tx$, where $x$ = number of half-steps.

$T_1, T_4, T_7, T_{10}$

Notate the pitch-class collections in mm. 1–4 and mm. 26–29 (fourth system, first four bars) on the following clock faces.

What transposition operation(s) can transform the mm. 1–4 collection into the mm. 26–29 collection? (In other words, by how many half-steps do you transpose the former to get the latter.) Notate your answer(s) as T$x$, where $x$ = number of half-steps.

$T_2$ $T_5$ $T_8$ $T_{11}$

How many possible octatonic collections are there?

3

Draw all of them on clock faces below.



C–C# OCTATONIC



C#–D OCTATONIC



D–Cb OCTATONIC