(1)

$$
\begin{gathered}
\text { If } a<0, \text { then } a x^{2}+b x+c=0 \\
\text { MUST / MAY / CAN'T have real roots. }
\end{gathered}
$$

> If $b^{2}-4 a c=0$, then $a x^{2}+b x+c=0$ MUST / MAY / CAN'T have one repeated real root.
(3)

If $a x^{2}+b x+c=0$ has no real roots, then $a x^{2}+b x-c=0$
MUST / MAY / CAN'T have two distinct real roots.
(4)

$$
\text { If } \frac{b^{2}}{a}<4 c, \text { then } a x^{2}+b x+c=0
$$

MUST / MAY / CAN'T have two distinct real roots.
(5)

If $b=0$, then $a x^{2}+b x+c=0$
MUST / MAY / CAN'T have one repeated real root.
(6)

The equation $a x^{2}+b x+c=0$
MUST / MAY / CAN'T have three real roots.
(7)

$$
\begin{aligned}
& \text { If } c=0 \text {, then } a x^{2}+b x+c=0 \\
& \text { MUST / MAY / CAN'T have real roots. }
\end{aligned}
$$

(8)

The equation $a x^{2}+b x+c=0$
MUST / MAY / CAN'T have the same number of real roots as

$$
a x^{2}-b x+c=0
$$

(9)

If $a x^{2}+b x+c=0$ has two distinct real roots, then we MUST / MAY / CAN'T have $a c<\frac{b^{2}}{4}$.

10

$$
\text { If } c>0 \text {, then } a x^{2}+b x+c=0
$$

MUST / MAY / CAN'T have two distinct real roots.
(11)

$$
\text { The equation } a x^{2}+b x+c=0
$$

MUST / MAY / CAN'T have the same number of real roots as

$$
c x^{2}+b x+a=0
$$

(12)

> If $a x^{2}+b x+c=0$ has no real roots, then $-a x^{2}-b x-c=0$ MUST / MAY / CAN'T have two distinct real roots.

