Homework due tonight!
More homework has been assigned.

$$\text{CH}_3$$

$$\frac{\text{Cl}_2}{\text{FeCl}_3}$$
heat

Choice 1

Choice 2

Choice 3

Choice 4

Dead End

SO: 0, 0, P
\[ \text{O, P-directors have groups that are good for } \text{C}^{+ \circ} \text{ electron donating} \]

\[ \text{Ar- } \text{m-directors have groups that are bad for } \text{C}^{+ \circ} \text{ - electron withdrawing} \]

\[ \text{Ar-NO}_2, \text{Ar-}^\text{Me}, \text{Ar-SO}_x \]
-choice 3 vs choice 4

$8 \text{e}^- \oplus$ vs $6 \text{e}^- \oplus$

are always better

Final conclusion is that anything with a lone pair of $\text{e}^-$ is $\text{O, p-directing}$
m-directing

o,p-directing

\[ \text{FeCl}_3 \text{ heat} \]

o,p-directing

\[ \text{FeCl}_3 \text{ heat} \]

\[ \text{CO}_2 \text{ heat} \]
2013-09-09 01 MECHANISM OF CHLORINATION OF ARENES:

Question:
Enter the correct word answer, then click "Submit".

Give the next major organic intermediate(s) of the following reaction. Please give your answer as a text answer. If more than one answer is correct, then put your answers in alphabetical order, separated by spaces. (Example: xxx a b)

![Reaction diagram]

E. There is no reaction under these conditions or the correct product is not listed here.

A C

2013-09-09 02 MECHANISM OF BROMINATION OF BENZOIC ACID:

Question:
Enter the correct word answer, then click "Submit".

Give the next major organic intermediate(s) of the following reaction. Please give your answer as a text answer. If more than one answer is correct, then put your answers in alphabetical order, separated by spaces. (Example: xxx a b)

![Reaction diagram]

B

2013-09-09 04 RESONANCE STRUCTURE P-BROMINATION OF ANILINE:

Question:
Enter the correct word answer, then click "Submit".

Which of the following resonance structures are correct for the p-bromination of aniline. Please give your answer as a text answer. If more than one answer is correct, then put your answers in alphabetical order, separated by spaces. (Example: xxx a b)

![Resonance structures]

A C E F