Guess a possible non-homog soln for the following DEs:
1a.) $y^{\prime \prime}-4 y^{\prime}-9 y=4 \cos (3 t)$
Guess:

1b.) $y^{\prime \prime}-9 y=4 \cos (3 t)$
Guess: $\qquad$
since no $y^{\prime}$ term, do not need___ term as no will appear on LHS when plug in guess.

1c.) $y^{\prime \prime}-9 y^{\prime}=4 \cos (3 t)$
Guess:

1d.) $y^{\prime \prime}+9 y=4 \cos (9 t)$
Guess:

1e.) $y^{\prime \prime}+9 y=4 \cos (3 t)$
Guess:

2a.) $y^{\prime \prime}+9 y=4 \cos (9 t)+t$
Guess:

2b.) $y^{\prime \prime}+9 y=4 \cos (3 t)+t$
Guess:
2c.) $y^{\prime \prime}+9 y=4 t \cos (9 t)$
Guess:
Alternatively, plus in wrong guess and see what is missing.

2d.) $y^{\prime \prime}+9 y=4 t \cos (3 t)$
Guess:

