

### Is it Particular?

**Quiz:** The first order linear DE  $\dot{x} + kx = t$  has general solution

$$x(t) = t/k - 1/k^2 + ce^{-kt}.$$

Which of the following could be chosen as a particular solution to the DE?

- a.  $t/k - 1/k^2$
- b.  $t/k - 1/k^2 + 3e^{-kt}$
- c.  $t/k - 1/k^2 + ce^{-kt}$
- d.  $e^{-kt}$

**Choices:**

- 1. (a) only
- 2. (b) only
- 3. (d) only
- 4. (a) and (b) only
- 5. (a), (b) and (c) only
- 6. All of them.

Pick what you think is the correct choice and then look at the answer.

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