

Quiz 7 Key — MA16020 — February 5, 2018

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Min	Mean	Max
1	4.8	10

1. (4 points) The following list of equations has one separable, one linear, one both, and one neither. Give the type of each.

(a)  $\frac{dy}{dx} = y + 1$

(c)  $-\frac{dy}{dx} = \sqrt{y} + x$

(b)  $3y' - xy^2 = x$

(d)  $t^2 dy + ty dt = 6 dt$

(a) Both

(c) Neither

(b) Separable

(d) Linear

2. (6 points) Find the general solution to  $\frac{dy}{dx} = y + x$ .

$y = -x - 1 + Ce^x$