

## Test 5

Tuesday 4<sup>th</sup> Dec 2018

Maths 10

Inequations

Name: \_\_\_\_\_

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### Problem 1

i) For what values of  $k$  does the equation

$$(k - 3)x^2 + 4(k - 9)x + (k - 3) \text{ have a double solution?}$$

ii) For each of these values of  $k$ , what is the solution?

### Problem 2

For what values of  $q$  does the equation

$$3qx^2 - (q + 3)x + 1 = 0 \text{ have}$$

i) *a double solution*

ii) *no solution?*

iii) *two solutions?*

### Problem 3

For what values of  $q$  does the equation

$$\lambda x^2 + 8x + 4\lambda = 0 \text{ have two solutions?}$$

( You may need the following rule : **If  $m^2 < A^2$  then  $-A < m < A$**  )