

0. Print your name: \_\_\_\_\_

1. Consider the IVP  $3x'' + 4x' - 2x = p(t)$ , with  $x(0) = 2$  and  $x'(0) = 3$ , where  $p(t)$  is a pulse of intensity 1 unit which starts at time  $t = 1$  and ends at time  $t = 2$ . Use the Laplace transform to turn this IVP into an algebraic problem involving  $X(s)$ , the transform of  $x(t)$ . You need not solve the algebraic problem.