

## Homework S2

1. (a) **Set up** an integral (or integrals) using  $dy$  to find the volume of the paraboloid obtained by revolving, around the  $y$ -axis, the region in the plane bounded by  $y = 3x^2$  and  $y = 12$  and having  $x \geq 0$ .
- (b) **Set up** an integral (or integrals) using  $dx$  to find the volume of the paraboloid obtained by revolving, around the  $y$ -axis, the region in the plane bounded by  $y = 3x^2$  and  $y = 12$  and having  $x \geq 0$ .
  
2. (a) **Set up** an integral (or integrals) using  $dy$  to find the volume of the solid obtained by revolving, around the  $x$ -axis, the region in the plane bounded by  $x = y^2$  and  $y = x - 2$  and having  $y \geq 0$ .
- (b) **Set up** an integral (or integrals) using  $dx$  to find the volume of the solid obtained by revolving, around the  $x$ -axis, the region in the plane bounded by  $x = y^2$  and  $y = x - 2$  and having  $y \geq 0$ .