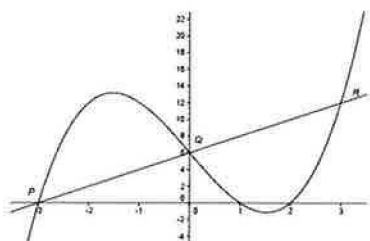
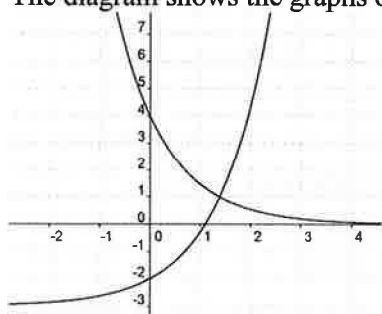


3. The graphs of $y = x^3 - 7x + 6$ and $y = 2x + 6$ are drawn



- Find the coordinates of their points of intersection P, Q and R.
- Find the area bounded by $y = x^3 - 7x + 6$ and $y = 2x + 6$

4. The diagram shows the graphs of $y = 4e^{-x}$ and $y = e^x - 3$



- Show that the curves intersect when $e^{2x} - 3e^x - 4 = 0$
- Hence show, by making a suitable substitution, that the x -coordinate of the point of intersection of the curves is $x = \ln 4$
- Find the exact area bounded by the curves and the y axis.

5. Find the volume of the solid formed when $y = \ln x$ is rotated about the y axis between $y = 0$ and 1 .

6. Find the volume of the solid generated when the area between the curves $y = x^2$ and $y = (x - 2)^2$ and the x axis is rotated about the x axis.

7. Find the volume of the solid formed when the region between the curves $y = x^2$ and $y = 8 - x^2$ are rotated about

- the x axis
- the y axis

8. Write down the formula for approximating $\int_a^b f(x)dx$

- Trapezoidal rule with
 - 3 function values
 - 5 function values

- Simpson's rule
 - 3 function values
 - 5 function values