$$= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

opp for integrading

diff α $\dfrac{der.}{funct}$

$\sin = \cos$

$\cos = -\sin$

$\tan = \sec^2$

$gp = \dfrac{a(r^x - 1)}{r - 1}$

$Ap = \dfrac{n}{2}\left(2a + (n-d)\right)$

Question 1

a) $\dfrac{5.8^2 - 3.1^3}{3 \times 3.1 \times 5.8} = \dfrac{33.64 - 29.791}{53.94}$
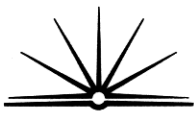
$$= \dfrac{3.849}{53.94}$$

$$= 0.071357063$$

To 3 sig fig $= 0.0713$

b) $x^3 + 2$

$\dfrac{dy}{dx} = 3x^2$

c) $x^2 = 5x$

$\cancel{0 = 5x = x^2}$

$\dfrac{x^{2}}{x} = 5$

$x = 5$

d) $\dfrac{3}{x} = 3x^{-1}$

$= \dfrac{3x^{0}}{0}$

e) $3x - \dfrac{2x-5}{2} = 6$

$6x - 2x - 5 = 12$

$6x - 2x - 5 - 12 = 0$

$6x - 2x - 17 = 0$

$\begin{array}{r}-17\\+2\end{array}$

$3x$

$3x$

f) $x - 2y = 8$ $\therefore y = 1 - 2x$

   $2x + y = 1$ $\therefore x - 2(1 - 2x) = 8$

                      $\therefore x - 2 + 4x = 8$

                      $\therefore x + 4x = 10$

$$\frac{5x}{5} = \frac{10}{5}$$

$$\therefore x = 2$$

sub: $y = 1 - 2(2)$

         $= 1 - 4$

         $= -3$

$\therefore x = 2, \; y = -3$