

$$a.) \quad \frac{33.64 - 29.791}{53.94} = 0.071357063$$

$$= 0.071 \text{ (3 sig. fig.)}$$

$$b.) \quad y = x^3 + 2$$

$$y' = 3x^2$$

c.)

~~$$x^2 = 5x$$

$$\log_e x^2 = \log_e 5x$$

$$2 \log_e x = \log_e 5x$$~~

$$x^2 - 5x = 0$$

$$x(x-5) = 0$$

$$x = 0 \text{ or } x = 5$$

$$d.) \quad \int \frac{3}{x} dx = 3 \log_e x + C$$

$$e.) \quad 3x - \frac{2x-5}{2} = 6$$

~~$$\frac{6(3x)}{2} - \frac{2x-5}{2} = 6$$~~

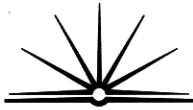
$$(x2) \quad 6x - 2x - 5 = 12$$

$$6x - 2x = 17$$

$$4x = 17$$

$$x = \frac{17}{4}$$

$$= 4\frac{1}{4}$$



$$P.) \quad x - 2y = 8 \dots\dots (1)$$

$$2x + y = 1 \dots\dots (2)$$

from (1) $x = 8 + 2y$

sub into (2)

$$2(8 + 2y) + y = 1$$

$$16 + 4y + y = 1$$

$$4y + y = -15$$

$$5y = -15$$

$$y = -3$$

sub into (1)

$$x - (2x - 3) = 8$$

$$x + 6 = 8$$

$$x = 2$$

so $x = 2$ and $y = -3$