

a) 0.0714

b) $x^3 + 2$

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

c) $x^2 = 5x$

$$x = 5$$

d) $\int \frac{3}{x} dx = \int \frac{3x^{-1}}{dx}$

$$= 3 \ln x$$

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

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

$$4x - 5 = 12$$

$$4x = 17$$

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

f) $x - 2y = 8$ ①

$$2x + y = 1$$
 ②

rearrange ② $\rightarrow y = 1 - 2x$ ③

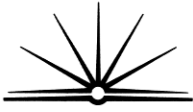
sub ③ \rightarrow ① $x - 2(1 - 2x) = 8$ ④

solve ④ $5x - 2 = 8$

$$5x = 10$$

$$\therefore x = 2$$
 ⑤

sub $x = 2$ ⑤ into ② $\rightarrow 4 + y = 1 \therefore y = -3$



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TEST

$$2x + y = 1$$

$$x = 2$$

$$y = -3$$

$$2(2) - 3 = 1$$

$$\therefore 4 - 3 = 1$$

$$\therefore x = 2 \quad y = -3$$