

(Making Subject)



Rearrange this formula to make the letter in the brackets the subject

(a) $y = \frac{x}{3} + 5$ (x) [2] (b) $J = mv - mu$ (m) [2]

(c) $A = \pi r l + \pi r^2$ (l) [2] (d) $2(w + h) = P$ (w) [2]

(e) $p = 2q^2$ (q) [2] (f) $A = (2\pi + y)x^2$ (x) [2]

g) $x = y + \sqrt{a}$ (a) [2] (h) $y = x^2 + 2$ (x) [2]

(i) $v = \frac{1}{3}Ah$

(i) Find V when $A = 15$ and $h = 7$. [1] (ii) Make h the subject of the formula. [2]

(j) $x = p^2 - q^2$ [1]

(i) Find the x when $p = 7$ and $q = 9$. [1] (ii) Make q the subject of the formula. [2]

(k) $T = 2\pi\sqrt{\frac{l}{g}}$

(i) Find T when $g = 9.8$ and $l = 2$. [2] (ii) Make g the subject of the formula [3]

(l) $v = \sqrt[3]{p+r}$ (r) [2] (m) $y = 2 + \sqrt{x-8}$ (x) [3]

(n) $y = \sqrt{x^2 + 1}$ (x) [3] (o) $c = \sqrt{a^2 + b^2}$ (b) [3]

(p) $rp + 5 = 3p + 8r$ (p) [3] (q) $s = ut + \frac{1}{2}at^2$ (a) [3]

(r) $y = (x-4)^2 + 6$ (x) [3] (s) $y = \frac{(x+3)^2}{5}$ (x) [3]

(t) $t = 2 - \frac{3w}{a}$ (w) [3] (u) $A = \pi x^2 - \pi y^2$ (y) [3]

(v) $4A = 4k^2 - \pi k^2$ (k) [3] (w) $c = \frac{4}{a-b}$ (a) [3]

(x) $c = \frac{5d+4w}{2w}$ (d) [3] (y) $A = \frac{r(y+2)}{5}$ (y) [3]

(z) $A = P + \frac{PRT}{100}$ (P) [3] (A) $w = \frac{1}{\sqrt{LC}}$ (c) [3]

(B) $c = \frac{4+w}{w+3}$ (w) [4] (C) $y = \sqrt{8 + \frac{4}{x}}$ (x) [4]

(D) $x = \frac{3m}{2-m}$ (m) [4] (E) $P = \frac{k+m}{m}$ (m) [4]

(F) $P = \frac{x+3}{x}$ (x) [4] (G) $3m + xy = \frac{xp}{4}$ (x) [4]

(H) $y = \frac{x+2}{x-4}$ (x) [4]



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ANSWERS:

- a) $3(y - 5)$ b) $J / (v - u)$ c) $(A - \pi r^2) / \pi r$ d) $(P/2) - h$
 e) $\pm \sqrt{\frac{p}{2}}$ f) $\pm \sqrt{\frac{A}{2\pi + y}}$ g) $(x - y)^2$ h) $\pm \sqrt{(y - 2)}$
 i) i) 35 ii) $3v/A$ j) i) -32 ii) $\pm \sqrt{(p^2 - x)}$ k) i) 2.84 ii) $4\pi^2 l / T^2$
 l) $v^3 - p$ m) $(y - 2)^2 + 8$ n) $\pm \sqrt{y^2 - 1}$ o) $\pm \sqrt{c^2 - a^2}$
 p) $(5 - 8r)/(3 - r)$ and $(8r - 5)/(r - 3)$ q) $2(s - ut)/t^2$ r) $\pm \sqrt{y - 6} + 4$
 s) $\pm \sqrt{5y} - 3$ t) $w = a(2 - t)/3$ u) $\pm \sqrt{\frac{\pi x^2 - A}{\pi}}$ v) $\pm \sqrt{\frac{4A}{4 - \pi}}$
 w) $4/c + b$ x) $(2wc - 4w)/5$ y) $5A/r - 2$ z) $100A/(100 + RT)$
 A) $1/w^2 L$ B) $(4 - 3c)/(c - 1)$ or $(3c - 4)/(1 - c)$ C) $4/(y^2 - 8)$
 D) $2x / (3 + x)$ E) $k/(P - 1)$ F) $3/(p - 1)$ G) $12m / (p - 4y)$
 H) $2(1 + 2y)/(y - 1)$