

【】 放物線と直線

【】 放物線の式・直線の式・交点など

[$y = ax^2$ の a の値]

[解答 1] $a = 2$

[解答 2] $a = \frac{1}{2}$

[解答 3] $a = \frac{5}{3}$

[$x = t$ とおく]

[解答 4] $t = 3$

[解答 5] (3, 9)

[直線の式]

[解答 6] (1) $a = \frac{1}{4}$ (2) $y = \frac{1}{2}x + 6$

[解答 7] (1) (6, 18) (2) $y = 2x + 6$

[交点の座標]

[解答 8] (-1, 1), (3, 9)

[解答 9] (1) (-4, 4) (2) $a = \frac{3}{2}$ (3) (10, 25)

[解答 10] (1) $y = x + 6$ (2) A : (-3, 3) C : (3, 9)

[最短距離]

[解答 11] (1) $\frac{1}{3}$ (2) 6

【】 面積を求める

[底辺が x 軸(y 軸)上]

[解答 12] (1) $y = x - 6$ (2) 36

[解答 13] (3, 9)

[解答 14] (1) $y = -x + 4$ (2) $\left(3, \frac{9}{2}\right)$

[y軸で2つの三角形に分ける]

[解答 15](1) A(-2, 4) B(3, 9) (2) 15

[解答 16](1) B(-2, 2) (2) $y = x + 4$ (3) 12

[解答 17](1) $y = 3x + 12$ (2) $a = \frac{3}{2}$ (3) 36

[解答 18](1) $a = \frac{1}{2}$ (2) $y = x + 4$ (3) 12 (4) $\left(3, \frac{9}{2}\right)$

[y軸に平行な直線で2つの三角形に分ける]

[解答 19](1) $y = 2x + 4$ (2) 9

[解答 20](3, 9)

[外側の長方形から複数の三角形を引く]

[解答 21]50

[解答 22] $a = \frac{8}{9}$

【】面積の二等分

[底辺の中点の座標]

[解答 23] $y = -5x$

[解答 24](1) $a = \frac{1}{2}$ (2) $y = 5x$

[解答 25](1) $a = 1$ (2) $y = 2x + 8$ (3) $y = \frac{8}{3}x + \frac{16}{3}$

[解答 26](1) $a = 2$ (2) $y = x + 3$

[四角形の面積の二等分など]

[解答 27] $a = -\frac{1}{4}$

[解答 28](1) $a = 1$ (2) $y = x + 6$ (3) $\left(\frac{25}{12}, \frac{97}{12}\right)$

[解答 29](1) 27 (2) $y = -2x + 6$

【】等積変形

[解答 30](1, 1)

[解答 31](1) (-2, 4) (2) $y = -x + 2$ (3) $x = -1$

[解答 32](1) $a = \frac{1}{3}$ (2) $y = x + 6$ (3) $t = 2$

[解答 33] $a = \frac{10}{13}$

【】 線分比と面積比

[解答 34](1) $y = x + 4$ (2) $1 : 3$

[解答 35](1) $a = 1$ (2) $y = 2x + 8$ (3) $\frac{3}{4}$ 倍

[解答 36](1) $a = \frac{1}{3}$ $b = 2$ (2) $(-6, 0)$ (3) $5 : 4$

[解答 37](1) $y = -x + 4$ (2) $(2\sqrt{2}, 4)$ (3) $y = \frac{5}{3}x + \frac{20}{3}$

【】 正方形・平行四辺形など

[正方形]

[解答 38] $(4, 8)$

[解答 39] $(2, 1)$

[解答 40](1) $\left(-a, \frac{1}{2}a^2\right)$ (2) $a = \frac{4}{3}$

[解答 41](1) $(2a, 2a^2)$ (2) $\left(\frac{2}{3}, \frac{8}{9}\right)$

[平行四辺形]

[解答 42](1) $A(6, 12)$ $B(-3, 3)$ (2) $(3, 15)$

[解答 43](1) $a = -2$ (2) $(2, 5)$ (3) $y = -\frac{3}{2}x + 4$

[解答 44] $a = \frac{1}{3}$

[解答 45] 3

【】 いろんな事象と関数

【】 動点

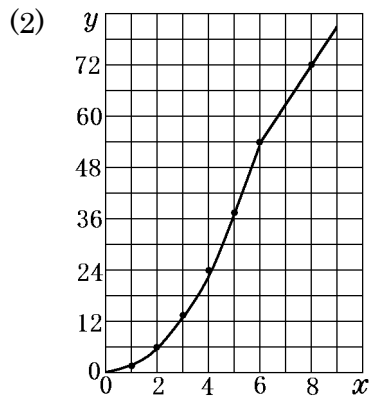
[解答 46](1) $y = x^2$ ② $0 \leq x \leq 10$ (2) $2\sqrt{3}$ 秒後

[解答 47](1) $y = 3x^2$ (2) 5 秒後

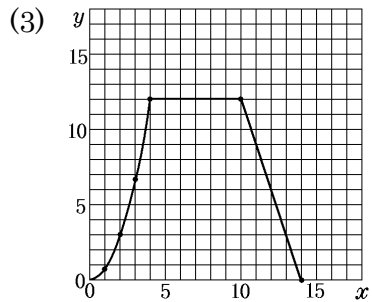
[解答 48](1)①式： $y = x^2$ 変域： $0 \leq x \leq 4$ ②式： $y = 4x$ 変域： $4 \leq x \leq 8$

(2) 6 秒後

[解答 49](1)① $y = \frac{3}{2}x^2$ ② $y = 9x$

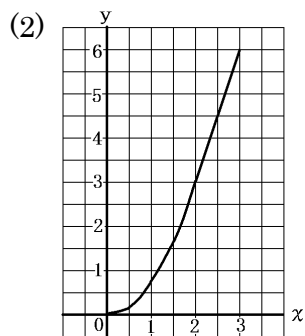


[解答 50](1)① $y = \frac{3}{4}x^2$ ② $y = 12$ ③ $y = -3x + 42$ (2) 12cm^2



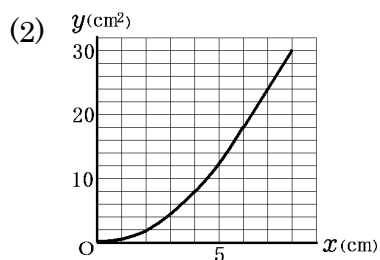
[解答 51](1)① $y = x^2$, $0 \leq x \leq 3$ ② $y = 3x$, $3 \leq x \leq 8$ (2) 12cm^2

[解答 52](1)① $y = \frac{3}{4}x^2$ ② $y = 3x - 3$

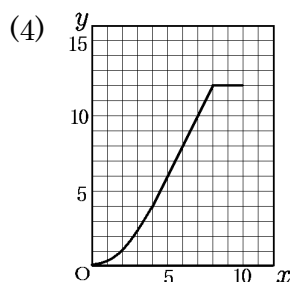


【】 図形の移動による重なる面積

[解答 53](1) $0 \leq x \leq 6 : y = \frac{1}{2}x^2$ $6 < x \leq 8 : y = 6x - 18$ (3) $\frac{19}{3} \text{cm}$



[解答 54](1) $y = 1$ (2) $0 < x \leq 4$ (3) $y = 8$



[解答 55](1) 152cm^2 (2) $\frac{1}{3}x^2 (\text{cm}^2)$ (3) $8x - 48 (\text{cm}^2)$

【】 落下運動・制動距離

[落下運動]

[解答 56](1) $y = 5x^2$ (2) 125m (3) 9 秒

[解答 57] 10 秒

[解答 58](1) $a = \frac{1}{4}$ (2) 2m/s (3) 8 秒後 (4) 12m

[制動距離]

[解答 59] $y = \frac{1}{160}x^2$

[解答 60](1) $y = \frac{2}{225}x^2$ (2) 時速 67km

【】 いろいろな関数

[解答 61](1) 500 円 (2) 600 円

[解答 62](1) 500 円 (2) 900 円 (3) イ

[解答 63](1) いえる (2) 120cm