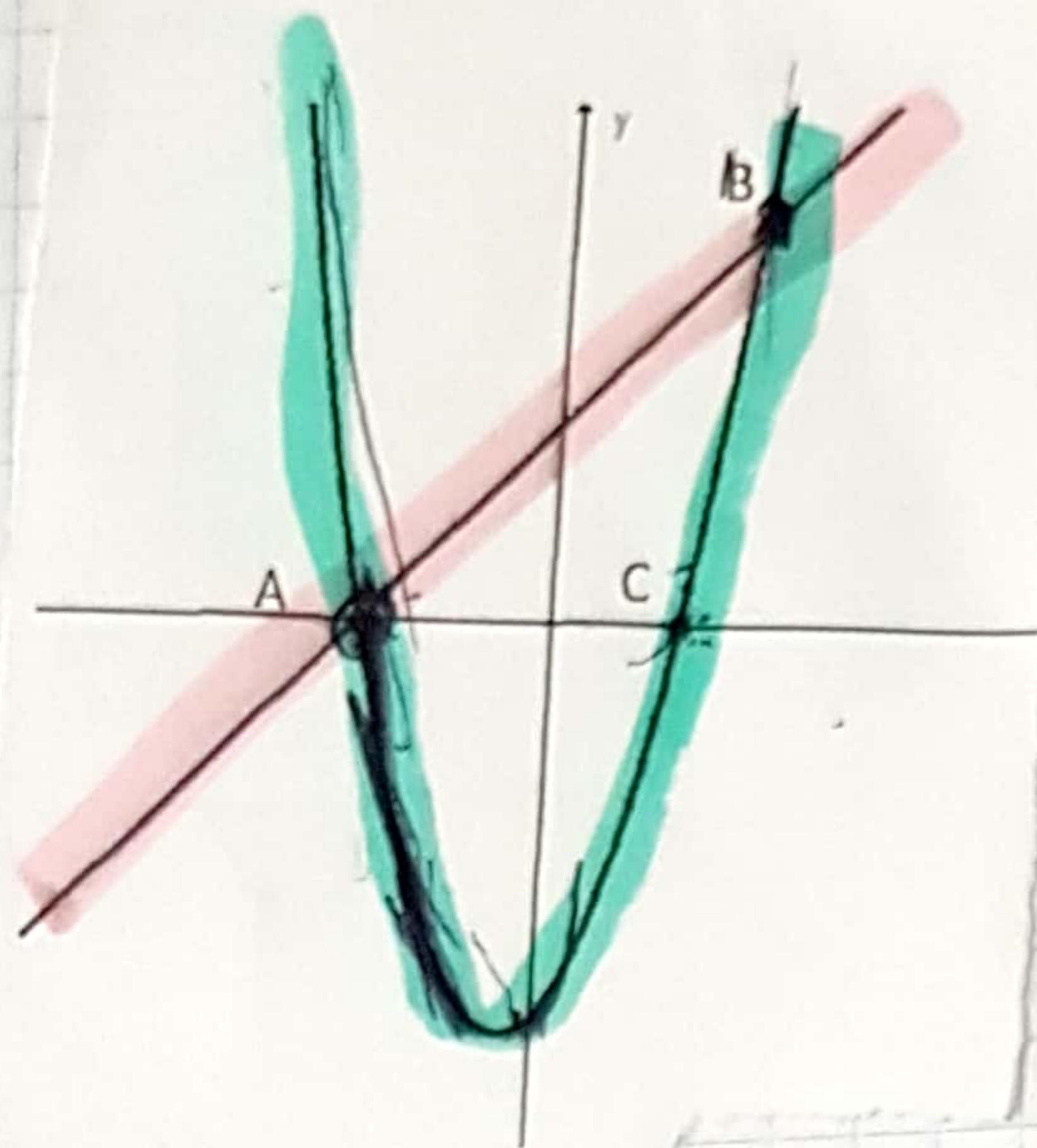




$$f(x) = (x-2)(x+3) \quad \text{כ} \quad (1)$$

$$g(x) = x + 3$$

פ' 3 ז' 2

$$0 = (x-2)(x+3)$$

מציאים x_1 ופשוט

$$x-2=0 \quad | +2$$

$$\boxed{x_1 = 2}$$

$$x+3=0 \quad | -3$$

$$\boxed{x_2 = -3}$$

$$C(2, 0)$$

$$A(-3, 0)$$

$$(x-2)(x+3) = (x+3) \quad | : (x+3) \quad \text{כ}$$

$$x-2=$$

$$(x+3) \neq 0$$

$\Downarrow$

$$x_1 = -3$$

$$x-2=1 \quad | +2$$

$$\boxed{x_2 = 3}$$

סופרים $g(x)$ ב' 3 ז'

$$g(x) = 3 + 3 =$$

$$\boxed{y = 6}$$

$$B(3, 6) \quad \text{נקודה}$$

$$2 > x > -3 \quad 3$$

(3)

$$f(x) = 3x^2 - 4x - 4$$

טענה	נכון	לא נכון
1 נקודת החיתוך עם ציר y היא (0, -4)	✓	
2 קדקוד הפונקציה הוא (-4, -4)		✓
3 לפונקציה שתי נקודות חיתוך עם ציר x	✓	
4 לפונקציה $y = -3x^2 + 4x + 4$ אותו ציר סימטריה כמו לפונקציה $f(x)$	✓	

נימוקים:

$$(1) -4 = 3 \cdot 0^2 - 4 \cdot 0 - 4$$

$$\boxed{-4 = -4} \checkmark$$

$$(2) \left(\frac{4}{6}, -4 - \frac{(-4)^2}{12} \right)$$

$$\left(\frac{2}{3}, -4 - \frac{16}{12} \right)$$

$$\left(\frac{2}{3}, -4 - 1\frac{1}{3} \right)$$

$$\left(\frac{2}{3}, -5\frac{1}{3} \right) \text{ שיעור הקודקוד}$$

$$(3) \text{ בסקרמנטה } -4 = 4 \cdot 3 \cdot (-4)$$

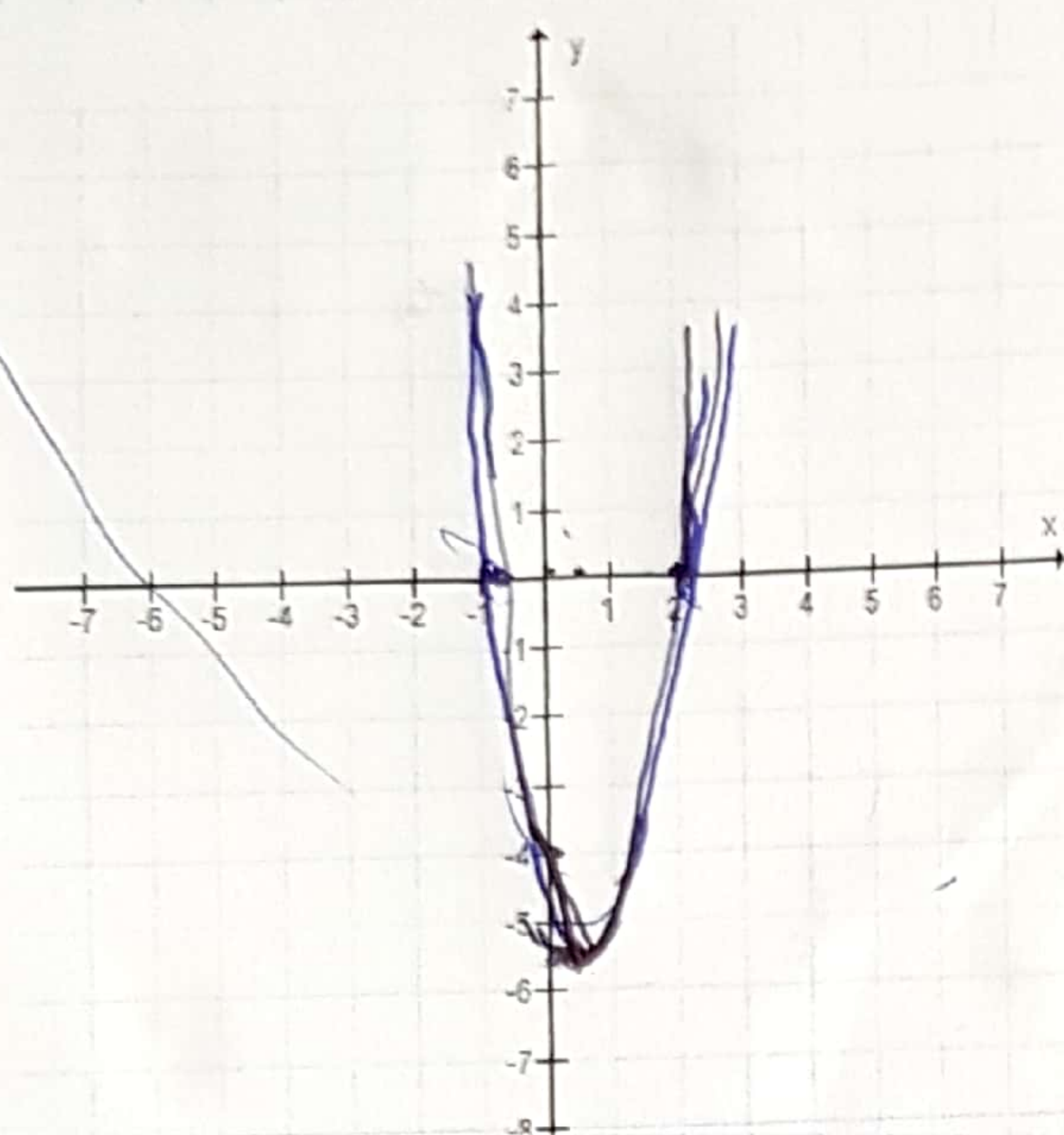
$$16 \cdot 48 = 64$$

הבסקרמנטה חיובית.

$$(4) \text{ שיעור } x \text{ הקודקוד } = \frac{-4}{-6} = \frac{2}{3}$$

$$\boxed{\frac{2}{3}}$$

(הזכרתי שזה 8.80M)



↓ 3.23M (3)
 $0 = 3x^2 - 4x - 4$

$$\frac{4 \pm \sqrt{c^2}}{c}$$

$$x = \frac{4 \pm 8}{6}$$

$$x_1 = \frac{4 + 8}{6} = \frac{12}{6} = 2$$

$$x_2 = \frac{4 - 8}{6} = \frac{-4}{6} = -\frac{2}{3}$$

$$g(x) = (x-2)(x-2) + 5(5)$$

$$g(x) = x^2 - 2x - 2x + 4 + 5$$

$$g(x) = x^2 - 4x + 9$$

חיסוב נקודת הקיצור

$$\left(\frac{4}{2}, 9 - \frac{16}{4}\right) =$$

$$(2, 5)$$

הזכרתי שזה 8.80M (3.23M)

$$16 - 36$$

$$-20$$

ולכן יש 0 נקודות חיתוך

(7) נתונה הפונקציה $f(x) = (x-2)^2 - 5$. כדי להגיע לפונקציה $g(x) = (x+1)^2 + 1$ צריך:

i. ללכת שמאלה 3 יח' ולרדת 6 יח'

ii. ללכת שמאלה 3 יח' ולעלות 6 יח'

iii. ללכת ימינה 3 יח' ולעלות 6 יח'

iv. ללכת ימינה 3 יח' ולרדת 6 יח'

h(x)

9) a. $g(x) = 2x^2 + 4x + 4$

$g(-2) = 2 \cdot (-2)^2 + 4 \cdot (-2) + 4$

$g(-2) = 8 - 8 + 4$

$g(-2) = 4$

$\left(\frac{-4}{2}, 4 - \frac{16}{8}\right)$

$(-1, 2)$

$-2x + 2 = x^2 - 3x + 2 \quad | +2x \quad (1)$

$0 = x^2 - x \quad | +x$

$x = x^2 \quad | :x$

$x_1 = 0$

$x \neq 0$

$x_2 = 1$

$(1, 0)$

$(0, 2)$

$g(x) \geq 2$

$g(1) = 0$

$g(1) = 0$

$y = 0$

$g(0) = 2$

$x > 1$

$\checkmark x < 0$

2

2.3) r/c (13)

$$0 = -x^2 + 6x \quad | +x^2$$

$$x^2 = 6x \quad | : x$$

$$\begin{matrix} x_1 = 0 \\ x_2 = 6 \end{matrix}$$

X	4	0
---	---	---

$$0 = x^2 - 6x + 6x$$

$$Gx = x^2 \setminus \cdot$$

$$X_1 = 0$$

$$X_2 = 6$$

כי $x^2 = (-x)^2$; תיבאר

אכן הטעם נכון

המקרה של x^2 הוא הכי קל כי

3121 3122 3123

ד.ס. 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922,

(A8)

$$-x+5 = -x^2+5x \quad | +x-5$$

$$0 = -x^2 + 6x - 5$$

(15) לפנים הגרפים של הפונקציות:

$$g(x) = -x + 5, \quad f(x) = -x^2 + 5x$$

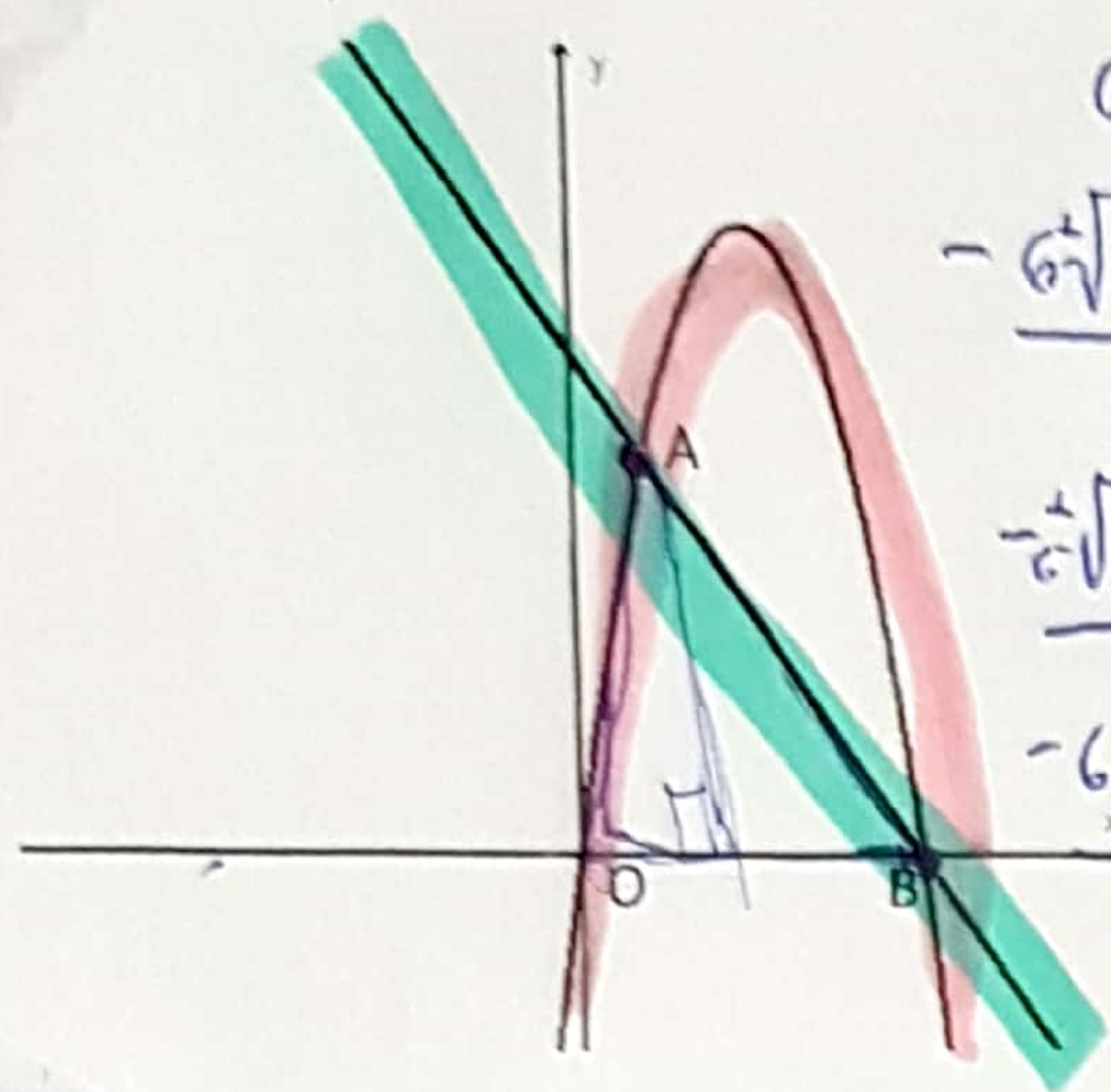
הפונקציות נחתכות בנקודות A, B

א. חשבו את שיעורי הנקודה B

$$B(5, 0)$$

ב. חשבו את שיעורי הנקודה A

$$A(1, 4)$$



$$\frac{-6 \pm 4}{-2}$$

$$x_1 = \frac{-6 + 4}{-2} = \boxed{1}$$

$$x_2 = \frac{-6 - 4}{-2} = \frac{-10}{-2} = \boxed{5}$$

$$g(5) = -5 + 5$$

$$g(x) = -x + 5$$

$$g(5) = 0$$

$$g(1) = -1 + 5$$

$$g(1) = 4$$

$$\boxed{y=4}$$

$$x < 1$$

או

$$x > 5$$

2

$$\frac{5-4}{2} = \boxed{10}$$

3

$$0 = (x-1)(x+4)$$

$$x_1 = 0$$

$$0 = x - 1$$

$$\boxed{x_1 = 1}$$

$$0 = x + 4$$

$$\boxed{x_2 = -4}$$

$$f(0) = (0-1)(0+4)$$

$$f(0) = -4$$

P.2.3N.10

P.2.3N.10

$$A(-4, 0)$$

$$B(1, 0)$$

$$C(0, -4)$$

$$y = mx + b$$

.2

$$I \quad 0 = m \cdot -4 + b$$

$$I \quad 0 = -4m + b$$

$$II \quad -4 = 0m + b$$

$$II \quad -4 = b$$

$$I \quad 0 = -4m \neq 4 \quad | +4$$

$$I \quad 4 = -4m \quad | : -1$$

$$I \quad -4 = 4m \quad | : 4$$

$$I \quad \boxed{-1 = m}$$

$$y = -x + b$$

.2

$$\boxed{y = -x - 4}$$

$$y = -x + b$$

.2

$$0 = -0 + b$$

$$b = 0$$

$$\boxed{m(x) = -x}$$

(19)

$$2x - 6 = x^2 - 6x - 3 \quad | +6 - 2x \quad .10$$

$$0 = x^2 - 4x + 3$$

$$0 = x^2 + 4x + 3$$

$$\frac{-4 \pm \sqrt{4^2 - 4 \cdot 1 \cdot 3}}{2}$$

$$\frac{-4 \pm \sqrt{16 - 12}}{2}$$

$$\frac{-4 \pm 2}{2}$$

$$x_1 = \frac{-4 + 2}{2} = \frac{-2}{2} = -1$$

$$x_2 = \frac{-4 - 2}{2} = \frac{-6}{2} = -3$$

$$y = -6 - 6$$

$$y = -12$$

$$K(-3, -12)$$

$$x > -3 \quad .2$$

$$y = 2x + b \quad .d$$

$$2 = 0 + b \quad |$$

$$\boxed{b = 2}$$

$$y = 2x + 2$$

$$(-3, 0) \quad .3$$

$$0 = 2x - 6 \quad | +6 \quad p(3, 0) \quad .7$$

$$6 = 2x \quad | :2$$

$$\boxed{3 = x}$$

$$\frac{6 \cdot 12}{2} = \boxed{36} \quad .1$$

$$-m \pm y = -2 - 6 \quad L(-1, -8) \quad .5$$

$$y = -8$$

$$y = -0 + 8$$

$$A(0, 8)$$

$$10(2)$$

$$y = 8$$

*

$$0 = -x + 8 \quad | +x$$

$$\boxed{x = 8}$$

$$B(8, 0)$$

$$\frac{8 \cdot 8}{2} = \boxed{32} \quad .2$$

$$x > 8 \quad .2$$

$$0 = x^2 - 6x + 8 \quad .3$$

$$* 6 \pm \frac{\sqrt{6^2 - 4 \cdot 8}}{2}$$

$$6 \pm \frac{\sqrt{36 - 32}}{2}$$

$$\frac{6 \pm \sqrt{4}}{2}$$

$$\frac{6 \pm 2}{2}$$

$$x_1 = \frac{6+2}{2} = \frac{8}{2} = \boxed{4}$$

$$x_2 = \frac{6-2}{2} = \frac{4}{2} = \boxed{2}$$

$$C(2, 0)$$

and

$$D(4, 0)$$

$$-x + 8 = x^2 - 6x + 8 \quad | +x \quad .1$$

$$0 = x^2 - 5x \quad | +5x$$

$$5x = x^2 \quad | :x$$

$$x \neq 0$$

$$\boxed{x_1 = 0}$$

$$\boxed{x_2 = 5}$$

$$y = -5 + 8$$

$$\boxed{y = 3}$$

$$E(5, 3)$$