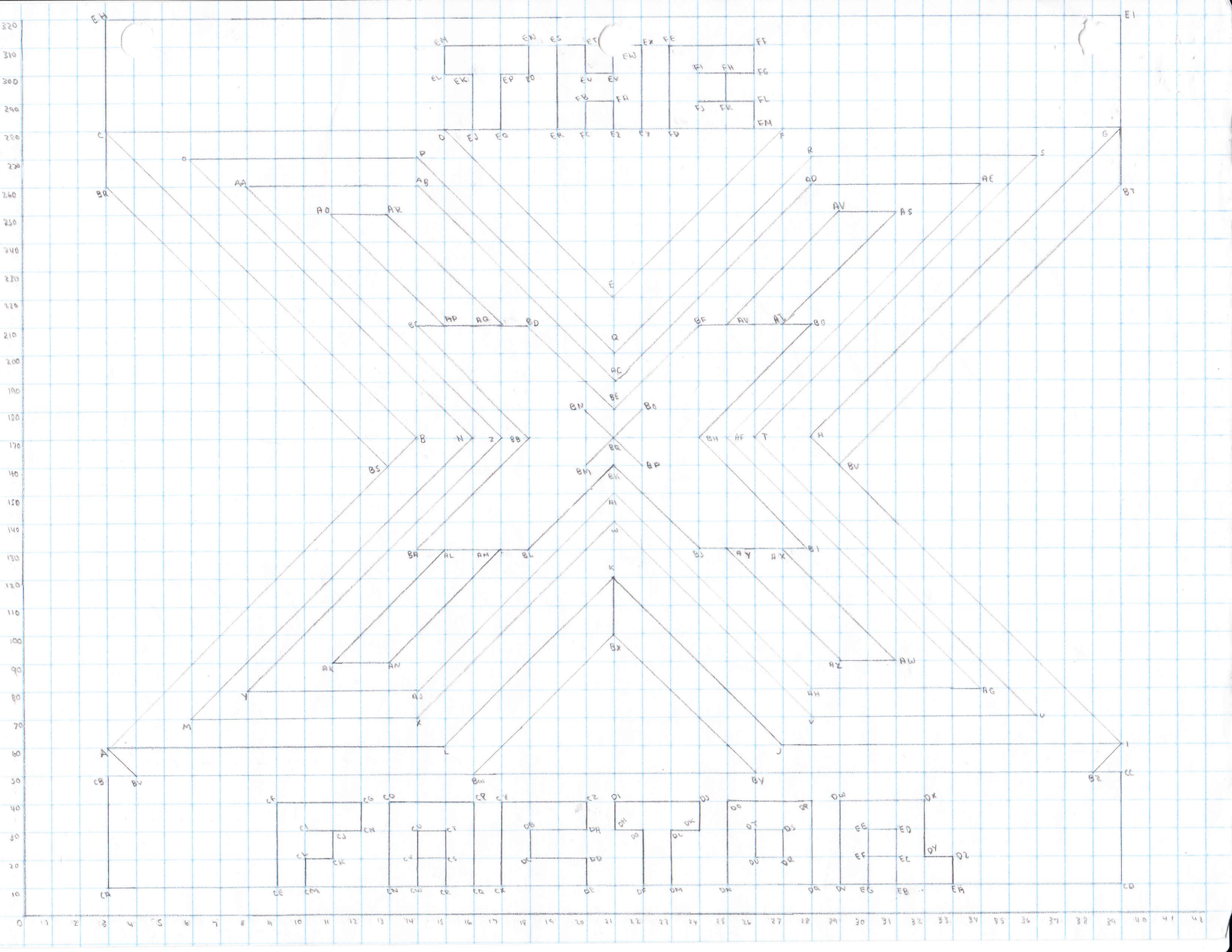
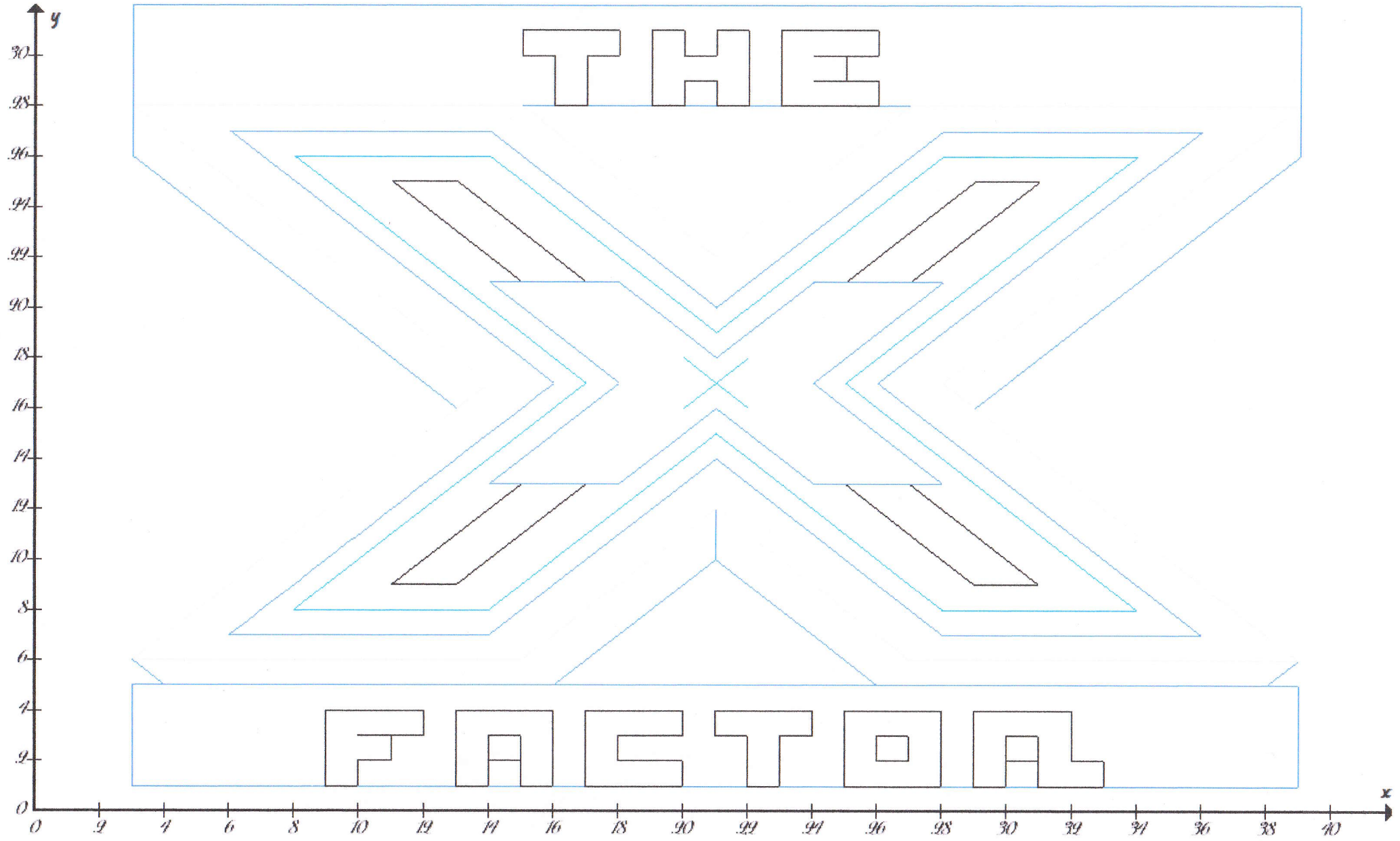
The X Factor

Doreen Guzman
Graph-It Art Project
Algebra 1
5-17-13





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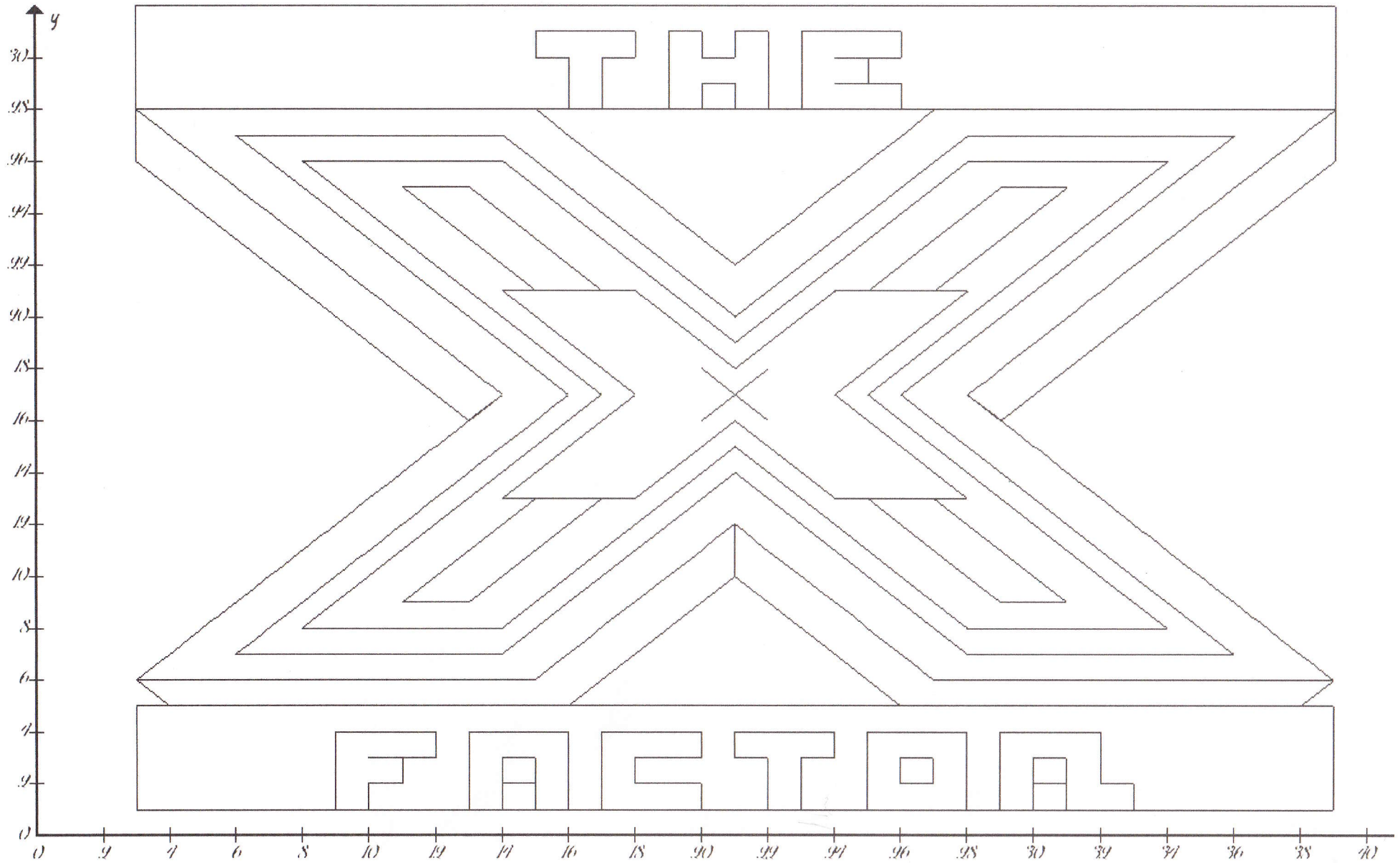
5-17-13
Algebra C



Doreen Gozman
12-19-12
Algebra 6

Doreen Guzman
2-18-13
Algebra 6

Positively Sloped

AB: $y = x + 3$ $3 \leq x \leq 14$	QR: $y = x - 1$ $21 \leq x \leq 28$	AE AF: $y = x - 8$ $25 \leq x \leq 34$	AU AV: $y = x - 4$ $25 \leq x \leq 29$	BN BP: $y = x - 4$ $20 \leq x \leq 22$
EF: $y = x + 1$ $21 \leq x \leq 27$	ST: $y = x - 9$ $26 \leq x \leq 36$	AI AJ: $y = x - 6$ $14 \leq x \leq 21$	BA BB: $y = x - 1$ $14 \leq x \leq 18$	B BS: $y = x + 3$ $13 \leq x \leq 14$
GH: $y = x - 11$ $28 \leq x \leq 39$	WX: $y = x - 7$ $14 \leq x \leq 21$	AK AL: $y = x - 2$ $11 \leq x \leq 15$	BE BF: $y = x - 3$ $21 \leq x \leq 24$	BT BU: $y = x - 13$ $29 \leq x \leq 39$
KL: $y = x - 9$ $15 \leq x \leq 21$	YZ: $y = x$ $8 \leq x \leq 17$	AM AN: $y = x - 4$ $13 \leq x \leq 17$	BG BH: $y = x - 7$ $24 \leq x \leq 28$	BW BX: $y = x - 11$ $16 \leq x \leq 21$
MN: $y = x + 1$ $6 \leq x \leq 16$	AC AD: $y = x - 2$ $21 \leq x \leq 28$	AS AT: $y = x - 6$ $27 \leq x \leq 31$	BK BL: $y = x - 5$ $18 \leq x \leq 21$	I BZ: $y = x - 33$ $38 \leq x \leq 39$

Vertical

C BR: $x = 3$ $26 \leq y \leq 28$	CL CM: $x = 10$ $1 \leq y \leq 2$	DD DE: $x = 20$ $1 \leq y \leq 2$	DT DU: $x = 26$ $2 \leq y \leq 3$	EJ EK: $x = 16$ $28 \leq y \leq 30$	EZ FA: $x = 21$ $28 \leq y \leq 29$
G BT: $x = 39$ $26 \leq y \leq 28$	CN CO: $x = 13$ $1 \leq y \leq 4$	DF DG: $x = 22$ $1 \leq y \leq 3$	DV DW: $x = 29$ $1 \leq y \leq 4$	EL EM: $x = 15$ $30 \leq y \leq 31$	FB FC: $x = 20$ $28 \leq y \leq 29$
K BX: $x = 21$ $10 \leq y \leq 12$	CP CQ: $x = 16$ $1 \leq y \leq 4$	DH DI: $x = 21$ $3 \leq y \leq 4$	DX DY: $x = 32$ $2 \leq y \leq 4$	EN EO: $x = 18$ $30 \leq y \leq 31$	FD FE: $x = 23$ $28 \leq y \leq 31$
CA CB: $x = 3$ $1 \leq y \leq 5$	CR CT: $x = 15$ $1 \leq y \leq 3$	DJ DK: $x = 24$ $3 \leq y \leq 4$	DZ EA: $x = 33$ $1 \leq y \leq 2$	EP EQ: $x = 17$ $28 \leq y \leq 30$	FF FG: $x = 26$ $30 \leq y \leq 31$
CC CD: $x = 39$ $1 \leq y \leq 5$	CU CW: $x = 14$ $1 \leq y \leq 3$	DL DM: $x = 23$ $1 \leq y \leq 3$	EB ED: $x = 31$ $1 \leq y \leq 3$	ER ES: $x = 19$ $28 \leq y \leq 31$	FL FM: $x = 26$ $28 \leq y \leq 29$
CE CF: $x = 9$ $1 \leq y \leq 4$	CX CY: $x = 17$ $1 \leq y \leq 4$	DN DO: $x = 25$ $1 \leq y \leq 4$	EE EG: $x = 30$ $1 \leq y \leq 3$	ET EU: $x = 20$ $30 \leq y \leq 31$	FH FK: $x = 25$ $29 \leq y \leq 30$
CG CH: $x = 12$ $3 \leq y \leq 4$	CZ DA: $x = 20$ $3 \leq y \leq 4$	DP DQ: $x = 28$ $1 \leq y \leq 4$	C EH: $x = 3$ $28 \leq y \leq 32$	EV EW: $x = 21$ $30 \leq y \leq 31$	
CJ CK: $x = 11$ $2 \leq y \leq 3$	DB DC: $x = 18$ $2 \leq y \leq 3$	DR DS: $x = 27$ $2 \leq y \leq 3$	G EI: $x = 39$ $28 \leq y \leq 32$	EX EY: $x = 22$ $28 \leq y \leq 31$	

Horizontal

CD: y = 28 3 ≤ x ≤ 15	AL AM: y = 13 15 ≤ x ≤ 17	BV BW: y = 5 4 ≤ x ≤ 16	CS CV: y = 2 14 ≤ x ≤ 15	DR DU: y = 2 26 ≤ x ≤ 27	EJ EQ: y = 28 16 ≤ x ≤ 17
FG: y = 28 27 ≤ x ≤ 39	AK AN: y = 9 11 ≤ x ≤ 13	BY BZ: y = 5 26 ≤ x ≤ 38	CY CZ: y = 4 17 ≤ x ≤ 20	DW DX: y = 4 29 ≤ x ≤ 32	ES ET: y = 31 19 ≤ x ≤ 20
IJ: y = 6 27 ≤ x ≤ 39	AP AQ: y = 21 15 ≤ x ≤ 17	CB CC: y = 5 3 ≤ x ≤ 39	DA DB: y = 3 18 ≤ x ≤ 20	DY DZ: y = 2 32 ≤ x ≤ 33	EU EV: y = 30 20 ≤ x ≤ 21
AL: y = 6 3 ≤ x ≤ 15	AO AR: y = 25 11 ≤ x ≤ 13	CA CD: y = 1 3 ≤ x ≤ 39	DC DD: y = 2 18 ≤ x ≤ 20	EA EB: y = 1 31 ≤ x ≤ 33	EW EX: y = 31 21 ≤ x ≤ 22
OP: y = 27 6 ≤ x ≤ 14	AT AU: y = 21 25 ≤ x ≤ 27	CF CG: y = 4 9 ≤ x ≤ 12	CX DE: y = 1 17 ≤ x ≤ 20	ED EE: y = 3 30 ≤ x ≤ 31	EY EZ: y = 28 21 ≤ x ≤ 22
RS: y = 27 28 ≤ x ≤ 36	AS AV: y = 25 29 ≤ x ≤ 31	CH CI: y = 3 10 ≤ x ≤ 12	DG DH: y = 3 21 ≤ x ≤ 22	DV EG: y = 1 29 ≤ x ≤ 30	FA FB: y = 29 20 ≤ x ≤ 21
UV: y = 7 28 ≤ x ≤ 36	AX AY: y = 13 25 ≤ x ≤ 27	CK CL: y = 2 10 ≤ x ≤ 11	DI DJ: y = 4 21 ≤ x ≤ 24	EC EF: y = 2 30 ≤ x ≤ 31	ER FC: y = 28 19 ≤ x ≤ 20
MX: y = 7 6 ≤ x ≤ 14	AW AZ: y = 9 29 ≤ x ≤ 31	CE CM: y = 1 9 ≤ x ≤ 10	DK DL: y = 3 23 ≤ x ≤ 24	EH EI: y = 32 3 ≤ x ≤ 39	FE FF: y = 31 23 ≤ x ≤ 26
AA AB: y = 26 8 ≤ x ≤ 14	BC BD: y = 21 14 ≤ x ≤ 18	CO CP: y = 4 13 ≤ x ≤ 16	DF DM: y = 1 22 ≤ x ≤ 23	DF: y = 28 15 ≤ x ≤ 27	FG FI: y = 30 24 ≤ x ≤ 26
AD AE: y = 26 28 ≤ x ≤ 34	BF BG: y = 21 24 ≤ x ≤ 28	CQ CR: y = 1 15 ≤ x ≤ 16	DO DP: y = 4 25 ≤ x ≤ 28	EK EL: y = 30 15 ≤ x ≤ 16	FJ FL: y = 29 24 ≤ x ≤ 26
AG AH: y = 8 28 ≤ x ≤ 34	BI BJ: y = 13 24 ≤ x ≤ 28	CT CU: y = 3 14 ≤ x ≤ 15	DN DQ: y = 1 25 ≤ x ≤ 28	EM EN: y = 31 15 ≤ x ≤ 18	FD FM: y = 28 23 ≤ x ≤ 26
Y AJ: y = 8 8 ≤ x ≤ 14	BA BL: y = 13 14 ≤ x ≤ 18	CN CW: y = 1 13 ≤ x ≤ 14	DS DT: y = 3 26 ≤ x ≤ 27	EO EP: y = 30 17 ≤ x ≤ 18	

Negatively Sloped

BC: y = -x + 31 3 ≤ x ≤ 14	PQ: y = -x + 41 14 ≤ x ≤ 21	AF AG: y= -x + 42 25 ≤ x ≤ 34	AY AZ: y= -x + 38 25 ≤ x ≤ 29	BM BO: y= -x +38 20 ≤ x ≤ 22
DE: y = -x + 43 15 ≤ x ≤ 21	TU: y = -x + 43 26 ≤ x ≤ 36	AH AI: y = -x + 36 21 ≤ x ≤ 28	BB BC: y= -x + 35 14 ≤ x ≤ 18	BR BS: y= -x + 29 3 ≤ x ≤ 13

Negatively Sloped				
HI: $y = -x + 45$ $28 \leq x \leq 39$	VW: $y = -x + 35$ $21 \leq x \leq 28$	AO AP: $y = -x + 36$ $11 \leq x \leq 15$	BD BE: $y = -x + 39$ $18 \leq x \leq 21$	H BU: $y = -x + 45$ $28 \leq x \leq 29$
JK: $y = -x + 33$ $21 \leq x \leq 27$	Z AA: $y = -x + 34$ $8 \leq x \leq 17$	AQ AR: $y = -x + 38$ $13 \leq x \leq 17$	BH BI: $y = -x + 41$ $24 \leq x \leq 28$	A BV: $y = -x + 9$ $3 \leq x \leq 4$
NO: $y = -x + 33$ $6 \leq x \leq 16$	AB AC: $y = -x + 40$ $14 \leq x \leq 21$	AW AX: $y = -x + 40$ $27 \leq x \leq 31$	BJ BK: $y = -x + 37$ $21 \leq x \leq 24$	BX BY: $y = -x + 31$ $21 \leq x \leq 26$

Doreen Guzman
11-23-12
Algebra 6

$\overline{AB}$ (3,6) (14,17) $3 \le x \le 14$

$m = \frac{6-17}{3-14} = \frac{-11}{-11} = 1$

$6 = 3(1) + b$

$\frac{6}{3} = \frac{3}{3} + \frac{b}{3}$

$3 = b$

$y = x + 3$

$\overline{BC}$ (14,17) (3,28) $3 \le x \le 14$

$m = \frac{17-28}{14-3} = \frac{-11}{11} = -1$

$28 = 3(-1) + b$

$\frac{28}{3} = \frac{-3}{3} + \frac{b}{3}$

$31 = b$

$y = -x + 31$

$\overline{CD}$ (3,28) (15,28) $3 \le x \le 15$

$y = 28$

$\overline{DE}$ (15,28) (21,22) $15 \le x \le 21$

$m = \frac{28-22}{15-21} = \frac{6}{-6} = -1$

$28 = 15(-1) + b$

$\frac{28}{15} = \frac{-15}{15} + \frac{b}{15}$

$43 = b$

$y = -x + 43$

$\overline{EF}$ (21,22) (27,28) $21 \le x \le 27$

$m = \frac{22-28}{21-27} = \frac{-6}{-6} = 1$

$22 = 21(1) + b$

$\frac{22}{21} = \frac{21}{21} + \frac{b}{21}$

$1 = b$

$y = x + 1$

31
14
17

(27,28) (39,28) $27 \le x \le 39$ $\overline{FG}$

$y = 28$

(39,28) (28,17) $28 \le x \le 39$ $\overline{GH}$

$m = \frac{28-17}{39-28} = \frac{11}{11} = 1$

$17 = 28(1) + b$

$\frac{17}{28} = \frac{28}{28} + \frac{b}{28}$

$-11 = b$

$y = x - 11$

(28,17) (39,6) $28 \le x \le 39$ $\overline{HI}$

$m = \frac{17-6}{28-39} = \frac{11}{-11} = -1$

$6 = 39(-1) + b$

$\frac{6}{39} = \frac{-39}{39} + \frac{b}{39}$

$45 = b$

$y = -x + 45$

(39,6) (27,6) $27 \le x \le 39$ $\overline{IJ}$

$y = 6$

(27,6) (21,12) $21 \le x \le 27$ $\overline{JK}$

$m = \frac{6-12}{27-21} = \frac{-6}{6} = -1$

$12 = 21(-1) + b$

$\frac{12}{21} = \frac{-21}{21} + \frac{b}{21}$

$33 = b$

$y = -x + 33$

(21,12) (15,6) $15 \le x \le 21$ $\overline{KL}$

$m = \frac{12-6}{21-15} = \frac{6}{6} = 1$

$6 = 15(1) + b$

$\frac{6}{15} = \frac{15}{15} + \frac{b}{15}$

$-9 = b$

$y = x - 9$

$\overline{AL}$ $(15,6)$ $(3,6)$ $3 \le x \le 15$

$y = 6$

$\overline{RS}$ $(28,27)$ $(36,27)$ $28 \le x \le 36$

$y = 27$

$\overline{MN}$ $(6,7)$ $(16,17)$ $6 \le x \le 16$

$m = \frac{7-17}{6-16} = \frac{-10}{-10} = 1$

$7 = 6(1) + b$

$7 = 6 + b$

$-6 \quad -6$

$1 = b$

$y = x + 1$

$\overline{ST}$ $(36,27)$ $(26,17)$ $26 \le x \le 36$

$m = \frac{27-17}{36-26} = \frac{10}{10} = 1$

$17 = 26(1) + b$

$17 = 26 + b$

$-26 \quad -26$

$-9 = b$

$y = x - 9$

$\overline{NO}$ $(16,17)$ $(6,27)$ $6 \le x \le 16$

$m = \frac{17-27}{16-6} = \frac{-10}{10} = -1$

$27 = 6(-1) + b$

$27 = -6 + b$

$+6 \quad +6$

$33 = b$

$y = -x + 33$

$\overline{TU}$ $(26,17)$ $(36,7)$ $26 \le x \le 36$

$m = \frac{17-7}{26-36} = \frac{10}{-10} = -1$

$7 = 36(-1) + b$

$7 = -36 + b$

$+36 \quad +36$

$43 = b$

$y = -x + 43$

$\overline{OP}$ $(6,27)$ $(14,27)$ $6 \le x \le 14$

$y = 27$

$\overline{UV}$ $(36,7)$ $(28,7)$ $28 \le x \le 36$

$y = 7$

$\overline{PQ}$ $(14,27)$ $(21,20)$ $14 \le x \le 21$

$m = \frac{27-20}{14-21} = \frac{7}{-7} = -1$

$20 = 21(-1) + b$

$20 = -21 + b$

$+21 \quad +21$

$41 = b$

$y = -x + 41$

$\overline{VW}$ $(28,7)$ $(21,14)$ $21 \le x \le 28$

$m = \frac{7-14}{28-21} = \frac{-7}{7} = -1$

$14 = 21(-1) + b$

$14 = -21 + b$

$+21 \quad +21$

$35 = b$

$y = -x + 35$

$\overline{QR}$ $(21,20)$ $(28,27)$ $21 \le x \le 28$

$m = \frac{20-27}{21-28} = \frac{-7}{-7} = 1$

$20 = 21(1) + b$

$20 = 21 + b$

$-21 \quad -21$

$-1 = b$

$y = x - 1$

$\overline{WX}$ $(21,14)$ $(14,7)$ $14 \le x \le 21$

$m = \frac{14-7}{21-14} = \frac{7}{7} = 1$

$7 = 14(1) + b$

$7 = 14 + b$

$-14 \quad -14$

$-7 = b$

$y = x - 7$

$\overline{MX}$ (14,7) (6,7) $6 \le x \le 14$ (28,26) (34,26) $28 \le x \le 34$ $\overline{AD}$ $\overline{AE}$

$y = 7$ $y = 26$

$\overline{YZ}$ (8,8) (17,17) $8 \le x \le 17$ (34,26) (25,17) $25 \le x \le 34$ $\overline{AE}$ $\overline{AF}$

$m = \frac{8-17}{8-17} = \frac{-11}{-11} = 1$ $m = \frac{26-17}{34-25} = \frac{9}{9} = 1$

$8 = 8(1) + b$ $17 = 25(1) + b$

$8 = 8 + b$ $17 = 25 + b$

$0 = b$ $-8 = b$

$y = x$ $y = x - 8$

$\overline{Z}$ $\overline{AA}$ (17,17) (8,26) $8 \le x \le 17$ (25,17) (34,8) $25 \le x \le 34$ $\overline{AF}$ $\overline{AG}$

$m = \frac{17-26}{17-8} = \frac{-9}{9} = -1$ $m = \frac{17-8}{25-34} = \frac{9}{-9} = -1$

$26 = 8(-1) + b$ $8 = 34(-1) + b$

$26 = -8 + b$ $8 = -34 + b$

$34 = b$ $42 = b$

$y = -x + 34$ $y = -x + 42$

$\overline{AA}$ $\overline{AB}$ (8,26) (14,26) $8 \le x \le 14$ (34,8) (28,8) $28 \le x \le 34$ $\overline{AG}$ $\overline{AH}$

$y = 26$ $y = 8$

$\overline{AB}$ $\overline{AC}$ (14,26) (21,19) $14 \le x \le 21$ (28,8) (21,15) $21 \le x \le 28$ $\overline{AH}$ $\overline{AI}$

$m = \frac{26-19}{14-21} = \frac{7}{-7} = -1$ $m = \frac{8-15}{28-21} = \frac{-7}{7} = -1$

$19 = 21(-1) + b$ $15 = 21(-1) + b$

$19 = -21 + b$ $15 = -21 + b$

$40 = b$ $36 = b$

$y = -x + 40$ $y = -x + 36$

$\overline{AC}$ $\overline{AD}$ (21,19) (28,26) $21 \le x \le 28$ (21,15) (14,8) $14 \le x \le 21$ $\overline{AI}$ $\overline{AJ}$

$m = \frac{19-26}{21-28} = \frac{-7}{-7} = 1$ $m = \frac{15-8}{21-14} = \frac{7}{7} = 1$

$19 = 21(1) + b$ $8 = 14(1) + b$

$19 = 21 + b$ $8 = 14 + b$

$-2 = b$ $-6 = b$

$y = x - 2$ $y = x - 6$

$\overline{AJ}$ $\overline{AK}$

$(14, 8)$ $(8, 8)$ $8 \leq x \leq 14$

$y = 8$

$\overline{AK}$ $\overline{AL}$

$(11, 9)$ $(15, 13)$ $11 \leq x \leq 15$

$m = \frac{9-13}{11-15} = \frac{-4}{-4} = 1$

$9 = 11(1) + b$

$9 = 11 + b$

$-11 \quad -11$

$-2 = b$

$y = x - 2$

$\overline{AL}$ $\overline{AM}$

$(15, 13)$ $(17, 13)$ $15 \leq x \leq 17$

$y = 13$

$\overline{AM}$ $\overline{AN}$

$(17, 13)$ $(13, 9)$ $13 \leq x \leq 17$

$m = \frac{13-9}{17-13} = \frac{4}{4} = 1$

$13 = 17(1) + b$

$13 = 17 + b$

$-17 \quad -17$

$-4 = b$

$y = x - 4$

$\overline{AK}$ $\overline{AN}$

$(13, 9)$ $(11, 9)$ $11 \leq x \leq 13$

$y = 9$

$\overline{AO}$ $\overline{AP}$

$(11, 25)$ $(15, 21)$ $11 \leq x \leq 15$

$m = \frac{25-21}{11-15} = \frac{4}{-4} = -1$

$25 = 11(-1) + b$

$25 = -11 + b$

$+11 \quad +11$

$36 = b$

$y = -x + 36$

$\overline{AP}$ $\overline{AQ}$

$(15, 21)$ $(17, 21)$ $15 \leq x \leq 17$

$y = 21$

$\overline{AQ}$ $\overline{AR}$

$(17, 21)$ $(13, 25)$ $13 \leq x \leq 17$

$m = \frac{21-25}{17-13} = \frac{-4}{4} = -1$

$21 = 17(-1) + b$

$21 = -17 + b$

$+17 \quad +17$

$38 = b$

$y = -x + 38$

$\overline{AR}$ $\overline{AS}$

$(11, 25)$ $(13, 25)$ $11 \leq x \leq 13$

$y = 25$

$\overline{AS}$ $\overline{AT}$

$(31, 25)$ $(27, 21)$ $27 \leq x \leq 31$

$m = \frac{25-21}{31-27} = \frac{4}{4} = 1$

$21 = 27(1) + b$

$21 = 27 + b$

$-27 \quad -27$

$-6 = b$

$y = x - 6$

$\overline{AT}$ $\overline{AU}$

$(27, 21)$ $(25, 21)$ $25 \leq x \leq 27$

$y = 21$

$\overline{AU}$ $\overline{AV}$

$(25, 21)$ $(29, 25)$ $25 \leq x \leq 29$

$m = \frac{21-25}{25-29} = \frac{-4}{-4} = 1$

$25 = 29(1) + b$

$25 = 29 + b$

$-29 \quad -29$

$-4 = b$

$y = x - 4$

$\frac{17}{16}$

$\overline{AS}$ $\overline{AV}$ $(29, 25)$ $(31, 25)$ $29 \leq x \leq 31$

$y = 25$

$\overline{AW}$ $\overline{AX}$ $(31, 9)$ $(27, 13)$ $27 \leq x \leq 31$

$m = \frac{9-13}{31-27} = \frac{-4}{4} = -1$

$9 = 31(-1) + b$

$\frac{9}{31} = \frac{-31}{31} + b$

$40 = b$

$y = -x + 40$

$\overline{AX}$ $\overline{AY}$ $(27, 13)$ $(25, 13)$ $25 \leq x \leq 27$

$y = 13$

$\overline{AY}$ $\overline{AZ}$ $(25, 13)$ $(29, 9)$ $25 \leq x \leq 29$

$m = \frac{13-9}{25-29} = \frac{4}{-4} = -1$

$9 = 29(-1) + b$

$\frac{9}{29} = \frac{-29}{29} + b$

$38 = b$

$y = -x + 38$

$\overline{AW}$ $\overline{AZ}$ $(29, 9)$ $(31, 9)$ $29 \leq x \leq 31$

$y = 9$

$\overline{BA}$ $\overline{BB}$ $(14, 13)$ $(18, 17)$ $14 \leq x \leq 18$

$m = \frac{13-17}{14-18} = \frac{-4}{-4} = 1$

$13 = 14(1) + b$

$\frac{13}{14} = \frac{14}{14} + b$

$-1 = b$

$y = x - 1$

$\overline{BB}$ $\overline{BC}$ $(18, 17)$ $(14, 21)$ $14 \leq x \leq 18$

$m = \frac{17-21}{18-14} = \frac{-4}{4} = -1$

$17 = 18(-1) + b$

$\frac{17}{18} = \frac{-18}{18} + b$

$35 = b$

$y = -x + 35$

$\overline{BC}$ $\overline{BD}$ $(14, 21)$ $(18, 21)$ $14 \leq x \leq 18$

$y = 21$

$\overline{BD}$ $\overline{BE}$ $(18, 21)$ $(21, 18)$ $18 \leq x \leq 21$

$m = \frac{21-18}{18-21} = \frac{3}{-3} = -1$

$21 = 18(-1) + b$

$\frac{21}{18} = \frac{-18}{18} + b$

$39 = b$

$y = -x + 39$

$\overline{BE}$ $\overline{BF}$ $(21, 18)$ $(24, 21)$ $21 \leq x \leq 24$

$m = \frac{18-21}{21-24} = \frac{-3}{-3} = 1$

$18 = 21(1) + b$

$\frac{18}{21} = \frac{21}{21} + b$

$-3 = b$

$y = x - 3$

$\overline{BF}$ $\overline{BG}$ $(24, 21)$ $(28, 21)$ $24 \leq x \leq 28$

$y = 21$

$\overline{BG}$ $\overline{BH}$ $(28, 21)$ $(24, 17)$ $24 \leq x \leq 28$

$m = \frac{21-17}{28-24} = \frac{4}{4} = 1$

$21 = 28(1) + b$

$\frac{21}{28} = \frac{28}{28} + b$

$-7 = b$

$y = x - 7$

$\overline{BH}$ $\overline{BI}$ (24, 17) (28, 13) $24 \le x \le 28$

$m = \frac{17-13}{24-28} = \frac{4}{-4} = -1$

$17 = 24(-1) + b$

$17 = -24 + b$

$+24 \quad +24$

$41 = b$

$y = -x + 41$

$\overline{BI}$ $\overline{BJ}$ (28, 13) (24, 13) $24 \le x \le 28$

$y = 13$

$\overline{BJ}$ $\overline{BK}$ (24, 13) (21, 16) $21 \le x \le 24$

$m = \frac{13-16}{24-21} = \frac{-3}{3} = -1$

$13 = 24(-1) + b$

$13 = -24 + b$

$+24 \quad +24$

$37 = b$

$y = -x + 37$

$\overline{RK}$ $\overline{BL}$ (21, 16) (18, 13) $18 \le x \le 21$

$m = \frac{16-13}{21-18} = \frac{3}{3} = 1$

$16 = 21(1) + b$

$16 = 21 + b$

$-21 \quad -21$

$-5 = b$

$y = x - 5$

$\overline{BA}$ $\overline{BL}$ (18, 13) (14, 13) $14 \le x \le 18$

$y = 13$

(20, 18) (22, 16) $20 \le x \le 22$ $\overline{BM}$ $\overline{BO}$

$m = \frac{18-16}{20-22} = \frac{2}{-2} = -1$

$18 = 20(-1) + b$

$18 = -20 + b$

$+20 \quad +20$

$38 = b$

$y = -x + 38$

$y = -x + 38$ (20, 16) $\overline{BN}$ $\overline{BP}$

$m = -1 \rightarrow 1$

$y - 16 = 1(x - 20)$ $20 \le x \le 22$

$y - 16 = x - 20$

$+16 \quad +16$

$y_2 = x - 4$

(3, 28) (3, 26) $26 \le y \le 28$ $\overline{C}$ $\overline{BR}$

$x = 3$

(3, 26) (13, 16) $3 \le x \le 13$ $\overline{BR}$ $\overline{BS}$

$m = \frac{26-16}{3-13} = \frac{10}{-10} = -1$

$26 = 3(-1) + b$

$26 = -3 + b$

$+3 \quad +3$

$29 = b$

$y = -x + 29$

(14, 17) (13, 16) $13 \le x \le 14$ $\overline{B}$ $\overline{BS}$

$m = \frac{17-16}{14-13} = \frac{1}{1} = 1$

$17 = 14(1) + b$

$17 = 14 + b$

$-14 \quad -14$

$3 = b$

$y = x + 3$

$\overline{G}$ $\overline{BT}$ (39, 28) (39, 26) $26 \leq y \leq 28$ (16, 5) (21, 10) $16 \leq x \leq 21$ $\overline{Bw}$ $\overline{Bx}$

$x = 39$

$m = \frac{5-10}{16-21} = \frac{-5}{-5} = 1$

$5 = 16(1) + b$

$\overline{BT}$ $\overline{BU}$ (39, 26) (29, 16) $29 \leq x \leq 39$

$m = \frac{26-16}{39-29} = \frac{10}{10} = 1$

$16 = 29(1) + b$

$16 = 29 + b$

$-29 \quad -29$

$-13 = b$

$y = x - 13$

$5 = 16 + b$

$-16 \quad -16$

$-11 = b$

$y = x - 11$

(21, 12) (21, 10) $10 \leq y \leq 12$ $\overline{K}$ $\overline{Bx}$

$x = 21$

$\overline{H}$ $\overline{BU}$ (28, 17) (29, 16) $28 \leq x \leq 29$

$m = \frac{17-16}{28-29} = \frac{1}{-1} = -1$

$17 = 28(-1) + b$

$17 = -28 + b$

$+28 \quad +28$

$45 = b$

$y = -x + 45$

(21, 10) (26, 5) $21 \leq x \leq 26$ $\overline{Bx}$ $\overline{By}$

$m = \frac{10-5}{21-26} = \frac{5}{-5} = -1$

$5 = 26(-1) + b$

$5 = -26 + b$

$+26 \quad +26$

$31 = b$

$y = -x + 31$

$\overline{A}$ $\overline{BV}$ (3, 6) (4, 5) $3 \leq x \leq 4$

$m = \frac{6-5}{3-4} = \frac{1}{-1} = -1$

$6 = 3(-1) + b$

$6 = -3 + b$

$+3 \quad +3$

$9 = b$

$y = -x + 9$

(26, 5) (38, 5) $26 \leq x \leq 38$ $\overline{By}$ $\overline{Bz}$

$y = 5$

(3, 1) (3, 5) $1 \leq y \leq 5$ $\overline{CA}$ $\overline{CB}$

$x = 3$

(3, 5) (39, 5) $3 \leq x \leq 39$ $\overline{CB}$ $\overline{CC}$

$\overline{BV}$ $\overline{Bw}$ (4, 5) (16, 5) $4 \leq x \leq 16$

$y = 5$

$y = 5$

(39, 5) (39, 1) $1 \leq y \leq 5$ $\overline{CC}$ $\overline{CD}$

$x = 39$

(3, 1) (39, 1) $3 \leq x \leq 39$ $\overline{CA}$ $\overline{CD}$

$y = 1$

$\overline{CE}$ $\overline{CF}$	(9,1) (9,4)	$1 \leq y \leq 4$		(16,1) (15,1)	$15 \leq x \leq 16$		$\overline{CQ}$ $\overline{CR}$
	$x = 9$			$y = 1$			
$\overline{CF}$ $\overline{CG}$	(9,4) (12,4)	$9 \leq x \leq 12$		(15,1) (15,3)	$1 \leq y \leq 3$		$\overline{CR}$ $\overline{CT}$
	$y = 4$			$x = 15$			
$\overline{CG}$ $\overline{CH}$	(12,4) (12,3)	$3 \leq y \leq 4$		(15,3) (14,3)	$14 \leq x \leq 15$		$\overline{CT}$ $\overline{CU}$
	$x = 12$			$y = 3$			
$\overline{CH}$ $\overline{CI}$	(12,3) (10,3)	$10 \leq x \leq 12$		(14,3) (14,1)	$1 \leq y \leq 3$		$\overline{CU}$ $\overline{CW}$
	$y = 3$			$x = 14$			
$\overline{CJ}$ $\overline{CK}$	(11,3) (11,2)	$2 \leq y \leq 3$		(13,1) (14,1)	$13 \leq x \leq 14$		$\overline{CW}$ $\overline{CW}$
	$x = 11$			$y = 1$			
$\overline{CK}$ $\overline{CL}$	(11,2) (10,2)	$10 \leq x \leq 11$		(15,2) (14,2)	$14 \leq x \leq 15$		$\overline{CS}$ $\overline{CV}$
	$y = 2$			$y = 2$			
$\overline{CL}$ $\overline{CM}$	(10,2) (10,1)	$1 \leq y \leq 2$		(17,1) (17,4)	$1 \leq y \leq 4$		$\overline{CX}$ $\overline{CY}$
	$x = 10$			$x = 17$			
$\overline{CE}$ $\overline{CM}$	(9,1) (10,1)	$9 \leq x \leq 10$		(17,4) (20,4)	$17 \leq x \leq 20$		$\overline{CY}$ $\overline{CZ}$
	$y = 1$			$y = 4$			
$\overline{CN}$ $\overline{CO}$	(13,1) (13,4)	$1 \leq y \leq 4$		(20,4) (20,3)	$3 \leq y \leq 4$		$\overline{CZ}$ $\overline{DA}$
	$x = 13$			$x = 20$			
$\overline{CO}$ $\overline{CP}$	(13,4) (16,4)	$13 \leq x \leq 16$		(20,3) (18,3)	$18 \leq x \leq 20$		$\overline{DA}$ $\overline{DB}$
	$y = 4$			$y = 3$			
$\overline{CP}$ $\overline{CQ}$	(16,4) (16,1)	$1 \leq y \leq 4$		(18,3) (18,2)	$2 \leq y \leq 3$		$\overline{DB}$ $\overline{DC}$
	$x = 16$			$x = 18$			

$\overline{DC}$	$\overline{DD}$	(18,2) (20,2)	$18 \leq x \leq 20$	$y = 2$	(25,1) (25,4)	$1 \leq y \leq 4$	$x = 25$	$\overline{DN}$ $\overline{DO}$
$\overline{DD}$	$\overline{DE}$	(20,2) (20,1)	$1 \leq y \leq 2$	$x = 20$	(25,4) (28,4)	$25 \leq x \leq 28$	$y = 4$	$\overline{DO}$ $\overline{DP}$
$\overline{CX}$	$\overline{DE}$	(17,1) (20,1)	$17 \leq x \leq 20$	$y = 1$	(28,4) (28,1)	$1 \leq y \leq 4$	$x = 28$	$\overline{DP}$ $\overline{DQ}$
$\overline{DF}$	$\overline{DG}$	(22,1) (22,3)	$1 \leq y \leq 3$	$x = 22$	(25,1) (28,1)	$25 \leq x \leq 28$	$y = 1$	$\overline{DN}$ $\overline{DQ}$
$\overline{DG}$	$\overline{DH}$	(22,3) (21,3)	$21 \leq x \leq 22$	$y = 3$	(27,2) (27,3)	$2 \leq y \leq 3$	$x = 27$	$\overline{DR}$ $\overline{DS}$
$\overline{DH}$	$\overline{DI}$	(21,3) (21,4)	$3 \leq y \leq 4$	$x = 21$	(27,3) (26,3)	$26 \leq x \leq 27$	$y = 3$	$\overline{DS}$ $\overline{DT}$
$\overline{DI}$	$\overline{DJ}$	(21,4) (24,4)	$21 \leq x \leq 24$	$y = 4$	(26,3) (26,2)	$2 \leq y \leq 3$	$x = 26$	$\overline{DT}$ $\overline{DU}$
$\overline{DJ}$	$\overline{DK}$	(24,4) (24,3)	$3 \leq y \leq 4$	$x = 24$	(27,2) (26,2)	$26 \leq x \leq 27$	$y = 2$	$\overline{DR}$ $\overline{DU}$
$\overline{DK}$	$\overline{DL}$	(24,3) (23,3)	$23 \leq x \leq 24$	$y = 3$	(29,1) (29,4)	$1 \leq y \leq 4$	$x = 29$	$\overline{DV}$ $\overline{DW}$
$\overline{DL}$	$\overline{DM}$	(23,3) (23,1)	$1 \leq y \leq 3$	$x = 23$	(29,4) (32,4)	$29 \leq x \leq 32$	$y = 4$	$\overline{DW}$ $\overline{DX}$
$\overline{DF}$	$\overline{DM}$	(22,1) (23,1)	$22 \leq x \leq 23$	$y = 1$	(32,4) (32,2)	$2 \leq y \leq 4$	$x = 32$	$\overline{DX}$ $\overline{DY}$

$\overline{DY}$ $\overline{DZ}$	(32,2) (33,2) $32 \leq x \leq 33$		(15,28) (27,28) $15 \leq x \leq 27$		$\overline{DF}$
	$y = 2$		$y = 28$		
$\overline{DZ}$ $\overline{EA}$	(33,2) (33,1) $1 \leq y \leq 2$		(16,28) (16,30) $28 \leq y \leq 30$		$\overline{EJ}$ $\overline{EK}$
	$x = 33$		$x = 16$		
$\overline{EA}$ $\overline{EB}$	(33,1) (31,1) $31 \leq x \leq 33$		(16,30) (15,30) $15 \leq x \leq 16$		$\overline{EK}$ $\overline{EL}$
	$y = 1$		$y = 30$		
$\overline{EB}$ $\overline{ED}$	(31,1) (31,3) $1 \leq y \leq 3$		(15,30) (15,31) $30 \leq y \leq 31$		$\overline{EL}$ $\overline{EM}$
	$x = 31$		$x = 15$		
$\overline{ED}$ $\overline{EE}$	(31,3) (30,3) $30 \leq x \leq 31$		(15,31) (18,31) $15 \leq x \leq 18$		$\overline{EM}$ $\overline{EN}$
	$y = 3$		$y = 31$		
$\overline{EE}$ $\overline{EG}$	(30,3) (30,1) $1 \leq y \leq 3$		(18,31) (18,30) $30 \leq y \leq 31$		$\overline{EN}$ $\overline{EO}$
	$x = 30$		$x = 18$		
$\overline{DV}$ $\overline{EG}$	(29,1) (30,1) $29 \leq x \leq 30$		(18,30) (17,30) $17 \leq x \leq 18$		$\overline{EO}$ $\overline{EP}$
	$y = 1$		$y = 30$		
$\overline{EC}$ $\overline{EF}$	(31,2) (30,2) $30 \leq x \leq 31$		(17,30) (17,28) $28 \leq y \leq 30$		$\overline{EP}$ $\overline{EQ}$
	$y = 2$		$x = 17$		
$\overline{C}$ $\overline{EH}$	(3,28) (3,32) $28 \leq y \leq 32$		(16,28) (17,28) $16 \leq x \leq 17$		$\overline{EJ}$ $\overline{EQ}$
	$x = 3$		$y = 28$		
$\overline{EH}$ $\overline{EI}$	(3,32) (39,32) $3 \leq x \leq 39$		(19,28) (19,31) $28 \leq y \leq 31$		$\overline{ER}$ $\overline{ES}$
	$y = 32$		$x = 19$		
$\overline{G}$ $\overline{EI}$	(39,28) (39,32) $28 \leq y \leq 32$		(19,31) (20,31) $19 \leq x \leq 20$		$\overline{ES}$ $\overline{ET}$
	$x = 39$		$y = 31$		

$\overline{ET}$ $\overline{EU}$ (20,31) (20,30) $30 \leq y \leq 31$ (23,28) (23,31) $28 \leq y \leq 31$ $\overline{FD}$ $\overline{FE}$

$x = 20$ $x = 23$

$\overline{EU}$ $\overline{EV}$ (20,30) (21,30) $20 \leq x \leq 21$ (23,31) (26,31) $23 \leq x \leq 26$ $\overline{FE}$ $\overline{FF}$

$y = 30$ $y = 31$

$\overline{EV}$ $\overline{EW}$ (21,30) (21,31) $30 \leq y \leq 31$ (26,31) (26,30) $30 \leq y \leq 31$ $\overline{FF}$ $\overline{FG}$

$x = 21$ $x = 26$

$\overline{EW}$ $\overline{EX}$ (21,31) (22,31) $21 \leq x \leq 22$ (26,30) (24,30) $24 \leq x \leq 26$ $\overline{FG}$ $\overline{FI}$

$y = 31$ $y = 30$

$\overline{EX}$ $\overline{EY}$ (22,31) (22,28) $28 \leq y \leq 31$ (24,29) (26,29) $24 \leq x \leq 26$ $\overline{FJ}$ $\overline{FL}$

$x = 22$ $y = 29$

$\overline{EY}$ $\overline{EZ}$ (22,28) (21,28 $21 \leq x \leq 22$ (26,29) (26,28) $28 \leq y \leq 29$ $\overline{FL}$ $\overline{FM}$

$y = 28$ $x = 26$

$\overline{EZ}$ $\overline{FA}$ (21,28) (21,29) $28 \leq y \leq 29$ (23,28) (26,28) $23 \leq x \leq 26$ $\overline{FD}$ $\overline{FM}$

$x = 21$ $y = 28$

$\overline{FA}$ $\overline{FB}$ (21,29) (20,29) $20 \leq x \leq 21$ (25,30) (25,29) $29 \leq y \leq 30$ $\overline{FH}$ $\overline{FK}$

$y = 29$ $x = 25$

$\overline{FB}$ $\overline{FC}$ (20,29) (20,28) $28 \leq y \leq 29$ (38,5) (39,6) $38 \leq x \leq 39$ $\overline{1}$ $\overline{BZ}$

$x = 20$ $m = \frac{5-6}{38-39} = \frac{-1}{-1} = 1$

$5 = 38(1) + b$

$\overline{ER}$ $\overline{FC}$ (19,28) (20,28) $19 \leq x \leq 20$ $5 = \frac{38}{38} + \frac{b}{38}$

$y = 28$ $-33 = b$

$y = x - 33$

Parallel/Perpendicular Lines

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5-17-13
Algebra 6

Parallel Lines:

CA CD: y = 1

CB CC: y = 5

Equations of parallel lines have the same slope and different y-intercept. These lines do not intersect with each other. On the two lines above, the slopes are the same. The slope being 0. The y-intercept above however is different. The first line being y = 1, while the second line is y = 5.

Perpendicular Lines:

BM BO: y = -x + 38

BN BP: y = x - 4

Equations of perpendicular lines have slopes that are the negative reciprocal of each other. These lines do intersect with each other. On the two lines above, the slopes are different. The slope of the first line is -1, while the slope in the second line is 1. The negative reciprocal of -1 is 1.

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Reflection

I thought the Graph-It Art project was a great way to learn and remember using equations in slope-intercept form, along with graphing it. It was really fun inputting the equations into an artwork. This project helped me remember what to do with slope-intercept form when it comes to tests and quizzes. The tricky part of the project in my opinion was poking the holes and putting the threading on the foam board. And I would say the easiest part of the project would be finding the slope, then finding the equation. Overall, I enjoyed the project and learned a lot from it.