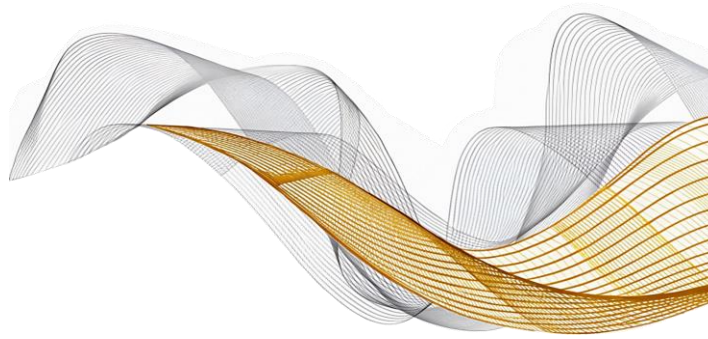


±

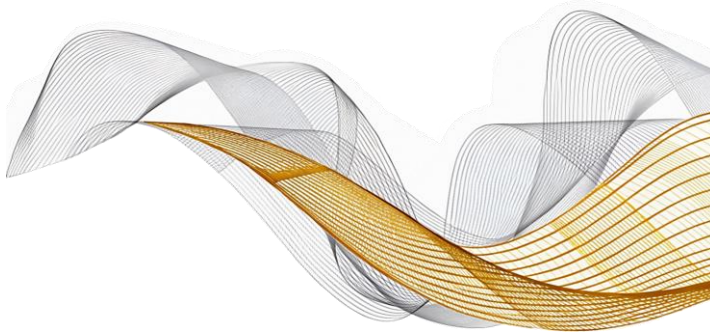
Please include all the signs

DN-A1

#	1		2		3		4		5		6		7	
1	***+2 + 2 =***	*	*-2 - 4 =*		*+1 + 6 =*		*+3 + 3 =*		*+2 + 8 =*		*-1 - 9 =*		***+3 + 7 =***	
2	*+6 + 2 =*		*-6 - 4 =*		*+6 + 9 =*		*-3 - 2 =*		*+3 + 8 =*		***-2 - 9 =***		*+7 + 2 =*	
3	***+1 + 2 =***		*-1 - 4 =*		*+6 + 2 =*		*+1 + 3 =*		*+4 + 8 =*		***-0 - 0 =***		*+1 + 7 =*	
4	*+5 + 2 =*		***-2v – 2v***		*+0 + 6 =*		*-3 - 0 =*		*+1 + 8 =*		***-4 - 9 =***		***+0 + 3 =***	
5	*+7 + 2 =*		*-7 - 4 =*		*+3 + 6 =*		*+3 + 6 =*		*+5 + 8 =*		*-5 - 9 =*		*+7 + 6 =*	
6	*+4 + 2 =*		***-4 - 4 =***		*+6 + 5 =*		*-8 - 3 =*		*+6 + 8 =*		***-6 - 1 =***		*+8 + 7 =*	
7	*+3 + 2 =*		*-3 - 4 =*		*+6 + 4 =*		*+3 + 7 =*		*7 + 8 =*		*-7 - 9 =*		*+7 + 7 =*	
8	*+0 + 2 =*		***-0 - 4***		*+9 + 6 =*		*-9 - 3 =*		*+8 + 8 =*		*-8 - 9 =*		*+9 + 7 =*	
9	*+9 + 2 =*		*-9 - 4 =*		*+6 + 7 =*		*+3 + 4 =*		*+9 + 8 =*		*-9 - 9 =*		***+a + a =***	
10	*+8 + 2 =*		*-8 - 4 =*		*+8 + 6 =*		*-9 - 3 =*		*+8 + 9 =*		***-0 - 9 =***		***+3 + 3 =***	
11	***+4 + 0***		*-2 - 5 =*		*+9 + 2 =*		*+1 + 4 =*		*+2 + 7 =*		*-3 - 8 =*		*+9 + 7 =*	
12	*+6 + 3 =*		*-6 - 5 =*		*+2 + 2 =*		*-4 - 9 =*		*+3 + 7 =*		*-8 - 2 =*		*+8 + 9 =*	
13	***+s + s***		*-5 - 9 =*		*+3 + 2 =*		*+4 + 2 =*		*+4 + 7 =*		*-6 - 2 =*		***+5 + 1 =***	
14	*+5 + 3 =*		***-k - k =***		*+0 + 2 =*		*-0 - 4 =*		*+5 + 7 =*		***-8 - 8 =***		*+4 + 9 =*	
15	*+7 + 3 =*		*-5 - 4 =*		*+2 + 9 =*		*+3 + 4 =*		*+6 + 7 =*		*-9 - 9 =*		*+3 + 9 =*	
16	*+4 + 3 =*		*-3 - 5 =*		*+8 + 2 =*		*-4 - 5 =*		*+7 + 7 =*		*-7 - 8 =*		***+9 + 2 =***	
17	***+3 + 5***		***-2 - 5***		*+2 + 6 =*		*+4 + 4 =*		*+8 + 7 =*		***-8 - 5 =***		***+8 + 1 =***	
18	*+0 + 3 =*		*-5 - 5 =*		*+2 + 3 =*		*-9 - 4 =*		*+9 + 7 =*		***-i - i =***		***+0 + 2 =***	
19	***+9 + 1 =***		*-7 - 5 =*		*+1 + 2 =*		*+4 + 7 =*		*+1 + 7 =*		*-1 - 8 =*		*+7 + 9 =*	
20	*+8 + 3 =*		***-1 - 5 =***		*+2 + 5 =*		*-8 - 4 =*		*+0 + 7 =*		***-3 - 4 =***		***+0 + 0 =***	*

± Please include all the signs

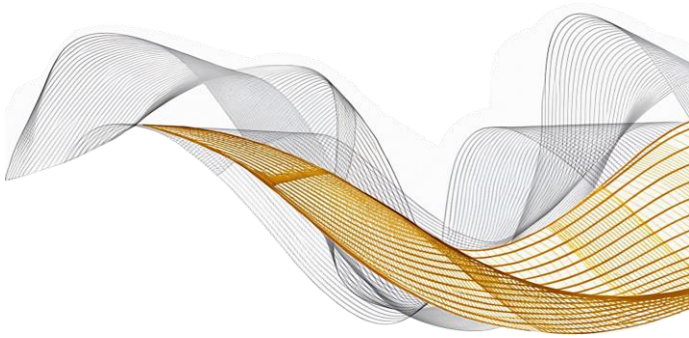
DN-A2



#	1		2		3		4		5		6		7	
1	+7 + 5 =	*	-2j – 4j =		+a + 6 =		+b +3b =		+t + t =		**-1 - 9 =**		+2 + 1 =	
2	+5p +1 =		-h - 4 =		+6 + b =		-3 - 2 =		+u + 8u =		-1 - 2 =		+8 + 2 =	
3	+8 + 3 =		-1 - 5 =		+6 + 2 =		+0 + 3 =		+v + 8v =		**-3i - 9 =**		**+1 + 1 =**	
4	+4 + 2t =		-5 - 8 =		+c + c =		-5 - 0 =		+w +8w =		-3 - 4 =		**+0 + 2 =**	
5	+6 + 2 =		-2 - k =		+d + e =		+4 + 6 =		+x + 8x =		-2 - 0 =		+0 + b =	
6	+7 +1y =		-4 - 0 =		+f + 5 =		-8 - 5 =		+y + 8 =		**-6p – 9u =**		+h + h =	
7	+2 + 2 =		-3g - 2g=		+6 + g =		+3 + 2 =		z + z =		-1 - 1 =		+y + y =	
8	+m + 2 =		-0 - 4 =		+9 + 6 =		-1 - 3 =		+y + 8 =		-8 - 9 =		**+9 + 1 =**	
9	+6 + 0 =		-5 - 4 =		+h + h =		+2 + 1 =		+f + f =		**-9i – 9s =**		**+0 + 1 =**	
10	+1 + h =		-1 - 1 =		+i + 6 =		-2 - 3 =		+h + f =		-0 - 9 =		**+3 + 1 =**	
11	+1f +0f =		-x - x =		+j + 2 =		+1 + 2 =		+2s + 7s =		-1 - 3 =		+g + g =	
12	+j + j =		-h - 5 =		+2k + 1k =		-4 - j =		+r + 7 =		**-6j – 1k =**		+4g + 4g =	
13	+4 + 1 =		-t - k =		+l + 2 =		+5 + 2 =		+4 + y =		-8 - 4 =		**+5 + 1 =**	
14	+5p +1 =		-m - jy =		+0 + m =		-0 - 2 =		+ys + ys =		**-5t - 5t =**		**+p + p =**	
15	+a + a =		-i - i =		+2 + 9 =		+3h+4h=		+2 + l =		-5 - 3 =		**+3 + 2 =**	
16	+2 + 9 =		-3 - 5 =		+n + 2 =		-h4 -h5=		+c + c =		-1 - 6 =		+5p + 1p =	
17	+5 + 4 =		-1 - 3 =		+2 + p =		+4 + 4 =		+n + m =		**-2u – 5u =**		+1 + 1 =	
18	+g + 3 =		-4 - 5 =		+2q +q3 =		-9 – 4s =		+j + 5 =		-3 - 1 =		**+0 + 3 =**	
19	+g2+g2=		-1 - 5 =		+r + 2r =		+4 +7a =		+2 + 7 =		**-9j – 8j =**		+5p + 1 =	
20	+5 + 1 =		-1f – 5f =		+s + s =		-2 - 4 =		+0 + 5 =		**-4s – 4s =**		+1 + 0 =	*

± Please include all the signs

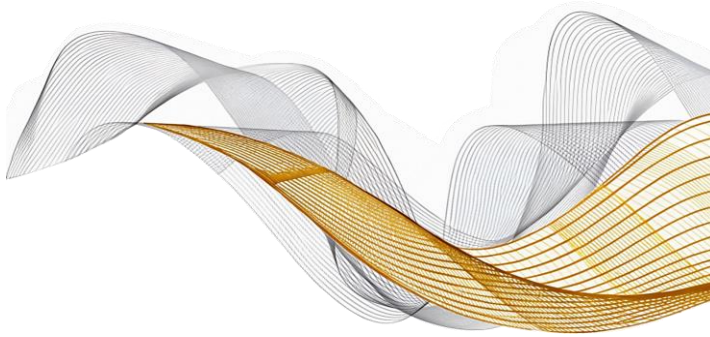
DN-M1



#	1		2		3		4		5		6		7	
1	-2 + 2 =	*	+2 - 4 =		-1 + 6 =		+3 + 3 =		-2 + 8 =		+1 - 9 =		+7 - 3 =	
2	**+6 - 2 =**		**-6 + 4 =**		-6 + 9 =		-3 - 2 =		-3 + 8 =		**+2 - 9 =**		+7 - 2 =	
3	-1 + 2 =		+1 - 4 =		+6 - 2 =		+1 - 3 =		-4 + 8 =		**+3 - 9 =**		**-1 + 7 =**	
4	+5 - 2 =		**-5 + 4**		-0 + 6 =		-3 - 0 =		-1 + 8 =		+4 - 9 =		+7 - 0 =	
5	+7 - 2 =		-7+ 4 =		-3 + 6 =		+3 + 6 =		-5 + 8 =		**+5 - 9 =**		**+7 - 6 =**	
6	+4 - 2 =		-4 + 4 =		+6 - 5 =		-8 + 3 =		-6 + 8 =		+6 - 9 =		+8 - 7 =	
7	**+3 - 2 =**		**+3 - 4 =**		+6 - 4 =		-3 + 7 =		-7 + 8 =		+7 - 9 =		**-7 + 7 =**	
8	-0 + 2 =		+0 - 4 =		+9 - 6 =		+9 - 3 =		-8 + 8 =		**+8 - 9 =**		+9 - 7 =	
9	+9 - 2 =		**-9 + 4**		-6 + 7 =		+3 - 4 =		+9 - 8 =		-9 + 9 =		**+x - x =**	
10	+8 - 2 =		-8 + 4 =		+8 - 6 =		-9 - 3 =		-8 + 9 =		**+0 - 9 =**		+7 - 5 =	
11	**-2 + 3 =**		+2 - 5 =		+9 - 2 =		-1 + 4 =		-2 + 7 =		+3 - 8 =		**+9 - 7 =**	
12	+6 - 3 =		-6 + 5 =		+2 - 2 =		-4 - 9 =		-3 + 7 =		-8 + 2 =		-8 + 9 =	
13	-1 + 3 =		+5 - 9 =		+3 - 2 =		+4 + 2 =		-4 + 7 =		**-6y + 2y =**		**-6 + 9 =**	
14	**+5s - 3s**		+5 - 8 =		-0 + 2 =		-0 + 4 =		-5 + 7 =		+8 - 8 =		**-4 + 9 =**	
15	+7 - 3 =		-5 + 4 =		-2 + 9 =		-3 + 4 =		-6 + 7 =		**-9 + 9 =**		-3 + 9 =	
16	**+4 - 3**		**+3 - 5 =**		+8 - 2 =		-4 + 5 =		+7 - 7 =		+7 - 8 =		-2 + 9 =	
17	+3- 3 =		+2 - 5 =		-2 + 6 =		+4 - 4 =		+8 - 7 =		-8 + 5 =		**-1 + 9 =**	
18	**-0 + 3**		+5 - 5 =		-2 + 3 =		+9 - 4 =		+9 - 7 =		**-8 + 2 =**		-0 + 9 =	
19	+9 - 3 =		**-7 + 5**		-1 + 2 =		-4 + 7 =		-1 + 7 =		+1 - 8 =		**-7 + 9 =**	
20	+8 - 3 =		+1 - 5 =		-2 + 5 =		-8 - 4 =		-0 + 7 =		**+3 - 4 =**		+9 - 7 =	*

± Please include all the signs

DN-M2

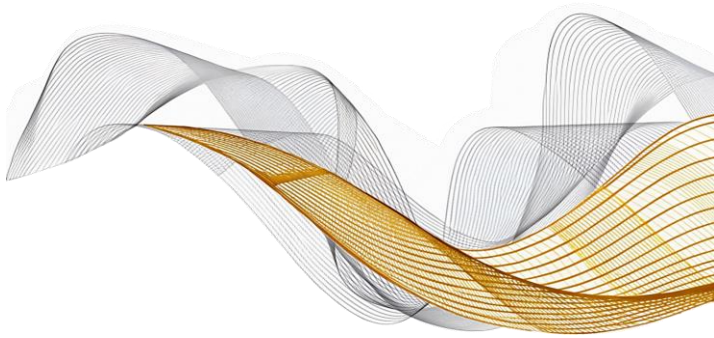


#	1		2		3		4		5		6		7	
1	-2 + 3 =	*	+2 - 1 =		-1 + 5 =		+3 + 2 =		-2 + 5 =		**+9 - 9 =**		**+2a - a =**	
2	+6 -4 =		-6 + 2 =		-6 + 3 =		-1 - 2 =		-3 + 3 =		+b - b =		+6 - 2 =	
3	-a + 2 =		+1 - 54 =		+k - 2 =		+v - 3v =		-4 + 2v =		**+2 - 9 =**		**-6 + 7 =**	
4	+5 - 1 =		-5 + 2 =		-2 + 6 =		-1 - 0 =		-1 + 88 =		+a - a =		+5 - 0 =	
5	+3 - 2 =		-60+ 4 =		-3 + 4 =		+3 + 4 =		-5 + 8 =		**+3 - 3 =**		+7 - 5 =	
6	+4b -2b=		-3h + 3h =		+hs - hs =		-k + 3 =		-6 + 2 =		+2 - 2 =		**+5 - 7 =**	
7	+p - 2 =		+3 - 1 =		+4 - 4 =		-2n + 7 =		-7a + a =		**+j - j =**		-5 + 7 =	
8	-0 + 2 =		+5 - 4 =		+2 - 6 =		+9 - 3n=		-8 + 8 =		+g - g =		**+4b - 4 =**	
9	+3 - 5 =		-6 + 4 =		-6 + 2 =		+2 - 4 =		+2 - 8 =		-2h + 2h =		+5 - 4 =	
10	+6 - 4 =		-w + w4 =		+j - 6 =		-7 - 3 =		-8 + 9 =		**+0 - 0 =**		+h - h =	
11	-1 + 5 =		+n – 5n =		+z – 2z =		-b + 4b =		-2 + 5 =		+p - p =		**+2z - 3z =**	
12	+f - f =		-rt + 5rt =		+2 - 2 =		-b - b =		-3b + b =		-e + 2e =		-4 + 9 =	
13	-1 + 6 =		+4 - 9 =		+n3 - 2 =		+y + 2 =		-1v + 7v =		**-g + t =**		**-s + 9 =**	
14	+u - 2u =		+5 - 5 =		-0 + 2p =		-0 + j =		-5y + 7y =		+2t – 2t =		-4 + 2 =	
15	+3 - 3 =		-2 + 4 =		-2c + 9C =		-3 + 5 =		-6 + 4 =		-u + u =		**-p + 3p =**	
16	+4 - 2 =		+m - 5 =		+8 - 2 =		-4 + i =		+7 - 7 =		**+q - q =**		-3 + 9 =	
17	+y – 3y =		+2 - 2 =		-2C + 6C =		+4 - 4 =		+8 - 2 =		-l + l =		**-1 + 7 =**	
18	-0 + 1 =		+b - 5 =		-2v + 3v =		+8 - 4 =		+6 - 7 =		**-n + 2n =**		-0 + 2t =	
19	+4 - 3 =		-e + e5 =		-1r + 2r =		-4 + 3 =		-0 + 7 =		+k - k =		**-7 + 4 =**	
20	+5 - 3 =		+q1 - 5q =		-2b + 5 =		-2 - 4 =		-777 + 7 =		**+l - v =**		+2 - 7 =	*

X SAME

Please include all the signs

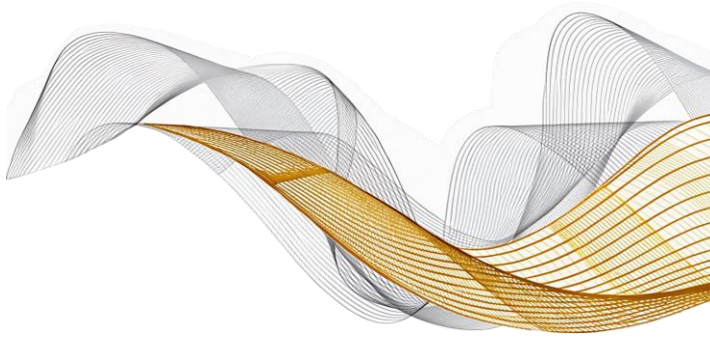
DN-MU1



#	1		2		3		4		5		6		7	
1	*+2 x +2 =*	*	*-2 x -2 =*		*+(+2) =*		*- (- 2) =*		*-5 (-2) =*		*-1 (-2) =*		***+7(+2) =***	
2	*+6 x +2 =*		*-6 x -2 =*		*- (- 9) =*		*+ (+ 2) =*		*-6 (-2) =*		*-2 (-2) =*		*+3 (+2) =*	
3	*+1 x +2 =*		***-1 x -2 =***		*+(+2) =*		*- (- 2) =*		*-7 (-2) =*		*-3 (-2) =*		*+2(+ 6) =*	
4	***+5 x +2 =***		*-5 x -2 =*		*- (- 2) =*		*+7(+2) =*		*-8 (-2) =*		***-4 (-2) =***		***+2(+4) =***	
5	*+7 x +2 =*		*-7 x -2 =*		*+ (+ 2) =*		*+3 (+2) =*		*-2 (-2) =*		*-5 (-2) =*		*+2(+5) =*	
6	*+4 x +2 =*		*-2 x -2 =*		*- (- 5) =*		*+2(+ 6) =*		*-0 (-2) =*		***-6 (-2) =***		***+4(+2) =***	
7	*+3 x +2 =*		***-3 x -2***		*+ (+ 4) =*		*+2(+4) =*		*-3 (-1) =*		*-7 (-2) =*		*+1(+2) =*	
8	*+0 x +2 =*		*-0 x -2 =*		*- (- 4) =*		*+2(+5) =*		*-1 (- 8) =*		***-8 (-2) =***		***+2(+0) =***	
9	***+9 x +2 =***		*-9 x -2 =*		*+ (+ 7) =*		*+4(+2) =*		*-2 (-2) =*		*-2 (-2) =*		*+2(+9) =*	
10	*+8 x +2 =*		***-8 x -2***		*- (- 2) =*		*-1 (- 2) =*		*-7 (-1) =*		***-0 (-2) =***		***+1(+1) =***	
11	*+2 x +3 =*		*-2 x -1 =*		*+ (+ 2) =*		*-1 (- 2)=*		*-1 (- 5) =*		*-3 (-1) =*		*+9(+1) =*	
12	*+6 x +1 =*		*-6 x -1 =*		*- (- 2) =*		*-1 (- 8) =*		*-2 x -2 =*		*-1 (- 2) =*		***+5(+1) =***	
13	***+1 x +1 =***		***-1 x -9 =***		*+ (+ 8) =*		*-2 (-2) =*		*-3 x -2 =*		*-1 (- 2)=*		*+1(+3) =*	
14	*+5 x +1 =*		*-1 x -8 =*		*+ (+0) =*		*+1(+3) =*		*-0 x -2 =*		***-1 (- 8) =***		***+4(+1) =***	
15	*+7 x +1 =*		*-1 x -4 =*		*- (- 9) =*		*+4(+1) =*		*-9 x -2 =*		***-2 (-2) =***		*+1(+5) =*	
16	***+4 x +1***		*-3 x -1 =*		*+ (+ 7) =*		*+1(+5) =*		*-8 x -2 =*		***-7 (-1) =***		***+2(+ 9) =***	
17	*+3 x +1 =*		***-2 x -1***		*-(- 2) =*		*- (- 9) =*		*-4 (-2) =*		*-1 (- 5) =*		*+1 (+0) =*	
18	*+0 x +1 =*		*-1 x -1 =*		*+(+ 3) =*		*+ (+ 7) =*		*-5 (-2) =*		***-8 (-1) =***		***+0 (+2) =***	
19	***+9 x +1***		***-7 x -1 =***		*+ (+6) =*		*-(- 2) =*		*-6 (-2) =*		***-1 (- 8) =***		*+7(+1) =*	
20	***+8 x +1***		*-1 x -1 =*		*-(-5) =*		*+(+ 3) =*		*-7 (-2) =*		*-3 (-4) =*		*+9(+1) =*	*

X SAME Please include all the signs

DN-MU2

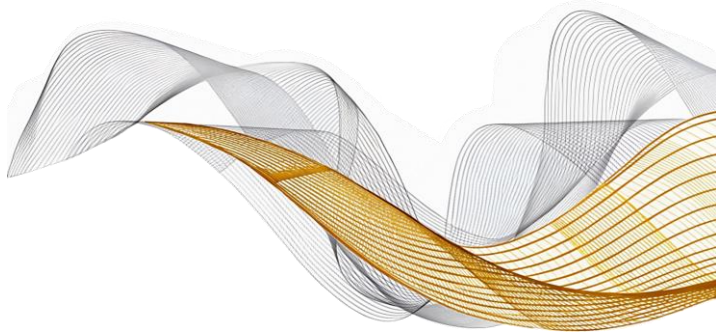


#	1		2		3		4		5		6		7	
1	+4 x +2 =	*	-9 x -2 =		+(+ud) =		- (- j) =		-5 (-2) =		**-1 (-3) =**		+7(+1) =	
2	+6 x +4 =		-6 x -9 =		- (- i) =		+ (+ 3) =		-6 (- 6) =		-7 (-2) =		+3 (+7) =	
3	+1 x +4 =		-1 x -9 =		+(+vc) =		- (- 9) =		-7 (-2) =		-3 (-9) =		**+x(+ x) =**	
4	+5 x +4 =		-5 x -9 =		- (- v) =		+7(+8) =		-8 (-2) =		**-7 (-2) =**		+7(+4) =	
5	+7 x +4 =		-7 x -9 =		+ (+ n) =		+3 (+3) =		-7 (-2) =		**-6 (-2) =**		+7(+5) =	
6	+4 x +4 =		-2 x -2 =		- (- z) =		+2(+ 8) =		-0 (-8) =		-6 (-2) =		**+7(+2) =**	
7	+3 x +4 =		-3 x -9 =		+ (+ x) =		+2(+4) =		-3 (-7) =		-3 (-2) =		+7(+6) =	
8	+0 x +2 =		-0 x -9=		- (- g) =		+2(+5) =		-8 (- 8) =		-3 (-2) =		+7(+0) =	
9	+9 x +4 =		-9 x -2 =		+ (+ h) =		+4(+4) =		-7 (-2) =		**-2 (-3) =**		+7(+9) =	
10	+8 x +4 =		-8 x -2 =		- (- q) =		-1 (- 4) =		-7 (-1) =		**-0 (-4) =**		**+x(+x) =**	
11	+5 x +3 =		-9 x -1 =		+ (+ i) =		-1 (- 3) =		-1 (- 8) =		-1 (-1) =		**+8(+1) =**	
12	+5 x +1 =		-6 x -9 =		- (- u) =		-1 (- 8) =		-2 x -7 =		-1 (- 2) =		+5(+8) =	
13	+1 x +5 =		-7 x -9 =		+ (+ y) =		-2 (-1) =		-3 x -8 =		**-1 (- 8) =**		+8(+3) =	
14	+5 x +1 =		-9 x -8 =		+ (+p) =		+1(+4) =		-0 x -7 =		**-1 (- 8) =**		**+4(+8) =**	
15	+7 x +5 =		-9 x -4 =		- (- n) =		+4(+6) =		-9 x -2 =		-9 (-2) =		**+8(+6) =**	
16	+4 x +5 =		-3 x -9 =		+ (+ m) =		+1(+5) =		-8 x -2 =		-7 (-1) =		**+8(+ 9) =**	
17	+3 x +5 =		-9 x -1 =		- (- k) =		- (- 4) =		-3 (-2) =		-1 (- 3) =		+8 (+0) =	
18	+0 x +5 =		-7 x -1 =		+ (+ j) =		+ (+ 3) =		-5 (-2) =		**-4 (-1) =**		+0 (+8) =	
19	+9 x +5 =		-7 x -6 =		+ (+ b) =		- (- 2) =		-6 (-7) =		**-7 (- 8) =**		**+8(+8) =**	
20	+8 x +5 =		-1 x -6 =		- (- c) =		+(+ 3) =		-7 (-8) =		-7 (-4) =		**+9(+1) =**	*

X÷ DIFFERENT

Please include all the signs

DN-MDX1

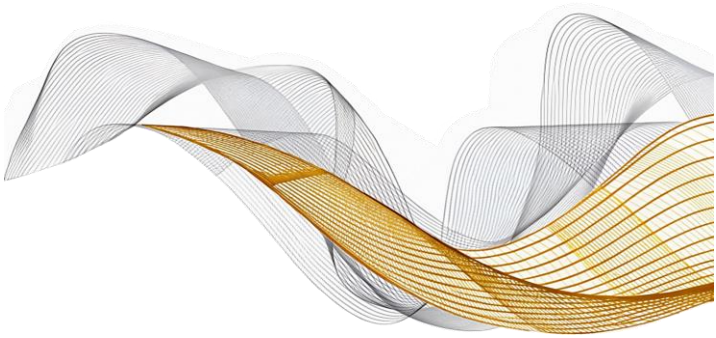


#	1		2		3		4		5		6		7	
1	+2 ÷ -2 =	*	+2 x -2 =		+(-2) =		- 3 - 2 =		-5 (-2) =		-1 (+2) =		-7(+2) =	
2	**+6 ÷ -2 =**		-6 x +2 =		- (- 9) =		+ (- 2) =		-6 (-2) =		+2 (-2) =		**-3(+2) =**	
3	-1 x +2 =		+1 x -2 =		+(-2) =		- 9+ 2) =		-7 -2 =		+3 (-2) =		+2(- 6) =	
4	+5 x -2 =		+5 x -2 =		- (+ 2) =		+7(+2) =		-8 + 2 =		-4 (+2) =		**-2(+4) =**	
5	-7 x +2 =		-7 x +2 =		+ (- 2) =		+3 (-2) =		+2 -2 =		+5 (-2) =		+2(-5) =	
6	-4 x +2 =		+2 ÷ -2 =		- (- 5) =		+2(+ 6) =		-0 +2 =		-6 (+2) =		**-4(+2) =**	
7	**+3 x -2**		-3 x +2 =		+ (+ 4) =		+2+4 =		-3 -1 =		+7 (-2) =		**+1(-2) =**	
8	+0 x -2 =		+0 x -2 =		- (- 4) =		+2(+5) =		-1 - 8 =		-8 (+2) =		-2(+0) =	
9	-9 x +2 =		+9 ÷ -2 =		+ (- 7) =		+4(-2) =		-2 -2 =		-2 (+2) =		**+2(-9) =**	
10	+8 x -2 =		-8 ÷ +2 =		- (+ 2) =		-1 (- 2) =		-7 +1 =		+0 (-2) =		+1(-1) =	
11	**-2 x +3 =**		-2 ÷ +1 =		+ (+ 2) =		-1 - 2 =		-1 (- 5) =		-3 (+1) =		-9(+1) =	
12	-6 x +1 =		+6 ÷ -1 =		- (- 2) =		-1 + 8 =		-2 - 9 =		-1 (+ 2) =		-5(+1) =	
13	+1 x -1 =		+1 ÷ -9 =		+ (- 8) =		-2 (-2) =		-3 x -2 =		+1 (- 2) =		**+1(-3) =**	
14	**-5 x +1**		-1 ÷ +8 =		+ (+0) =		+1+3 =		-0 x -2 =		+1 (- 8) =		-4(+1) =	
15	+7 x -1 =		+1 ÷ -4 =		- (+ 9) =		+4 -1) =		-9 x -2 =		-2 (+2) =		+1(-5) =	
16	-4 x +1 =		+3 ÷ -1 =		- (+ 7) =		+1(-5) =		-8 x -2 =		+7 (-1) =		**-2(+9) =**	
17	**+3 x -1 =**		-2 ÷ +1 =		+(- 2) =		- (+ 9) =		-4 -2=		-1 (+5) =		+1 (-0) =	
18	-0 x +1 =		+1 ÷ -1 =		+(- 3) =		- (+ 7) =		+5 + 2 =		+8 (-1) =		**+0 (-2) =**	
19	**+9 x -1**		-7 ÷ +1 =		+ (-6) =		-(+ 2) =		-6 -2 =		-1 (+ 8) =		-7(+1) =	
20	-8 x +1 =		+1 ÷ -1 =		+(-5) =		+(+ 3) =		-7 +2 =		+3 (-4) =		**+9(-1) =**	*

X÷ DIFFERENT

Please include all the signs

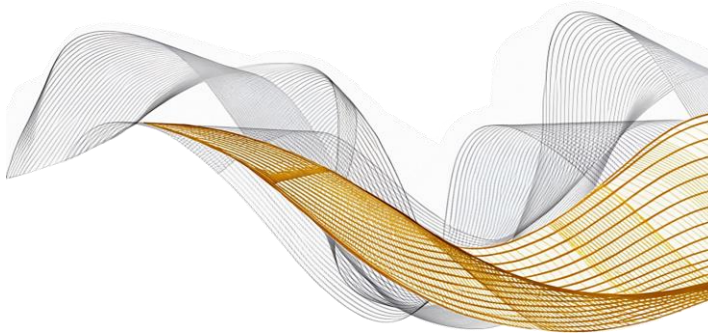
DN-MDX2



#	1		2		3		4		5		6		7	
1	-2 x -2 =	*	-2j ÷ +2 =		-6(-2) =		-0 (- 2) =		-5 -2 =		x/4 x +4		**+14 ÷ -2**	
2	-6 x +2 =		-6 ÷-2 =		- 5(- 9) =		+5k ÷+5k		-6 +2=		-2 ÷+2 =		-3 (-2) =	
3	+1 x +2 =		-10m ÷ -2		+7(+2) =		-2d ÷ - 2d		-7 (+2) =		+3 +2 =		+2(- 6) =	
4	+5 - 2 =		-15y ÷ -3		-6g ÷ - 2		+7n -7n =		-8 (-2) =		-4 -2 =		**-4x+4x =**	
5	-7 x +2 =		+10p ÷ -2		+6y -6y		-3s +3s =		+2 (+2)		-5 +2 =		-2-5 =	
6	-4 -2 =		-2p +2p =		- 7t + 7t=		-2z (+ 0) =		-0 (-2) =		+6 -2 =		**-4+2 =**	
7	+3 - 2 =		-3 x -2 =		+8i – 8i =		+0(+wk4)		-3 -1 =		-7 -2 =		+1+2 =	
8	0 x +2 =		-0 x -2 =		-8i ÷ - 4		+2(-5) =		+1 - 8 =		+8t ÷ +2		**-2(+0) =**	
9	-9 +2 =		-9 -2 =		+4 + 7 =		-4a ÷ -4a		-2 -2 =		-9 (+6)		+2(-9) =	
10	-8 ÷ -2 =		-8 +2 =		- 4 x - 2 =		- (- 1) =		-7 +1 =		-0 (+2)		**-15n ÷ -5**	
11	+2 x +3 =		-2 -1 =		-3 (- 7) =		-1 - 2 =		-1 - 5 =		-30q +5		-9(-1) =	
12	-6 x -1 =		-6 x -1 =		-4 - 2 =		+1 - 8 =		-8 x -2 =		-7 - 2 =		**-5n+5n =**	
13	+13y -13y		-1 x -9 =		+ (- 8) =		-2 -2 =		-3 x -2 =		+9 - 2 =		+1(-3) =	
14	-5 + 1 =		+1 -8 =		- (+0) =		+3b-3b =		-0 x -2 =		-5 - 8 =		**-3b ÷ +3 =**	
15	-7 - 1 =		-1 x -4 =		-6 ÷ + 3 =		-4r+4r =		-9 -2 =		-4h ÷ -2		+1-5 =	
16	-4 ÷ +1 =		-3 -1 =		-81 ÷+ 9		+(+5) =		-8 -2 =		-7 (-1) =		**-2(- 9) =**	
17	-3x + 3x =		-2 + 1 =		-(+2) =		- (- 9) =		-4 +2 =		-5b + 5b		-1 +9 =	
18	+0 x +1 =		-10f ÷ -5		-4(+ 8) =		+ (- 7) =		-5 -2 =		-8k +8k		**+0 (+2) =**	
19	-9 x -1 =		-7 x -1 =		+ 7+6 =		-8t ÷ - 2		-6 (-2) =		-1 - 8 =		-7-1 =	
20	+8 -1 =		-1 x -1 =		u/2 x 2		+6a ÷ - 3		-7 (+2) =		-3 (+4) =		+9 +1 =	*

X ÷ ± Please include all the signs

DN-X1

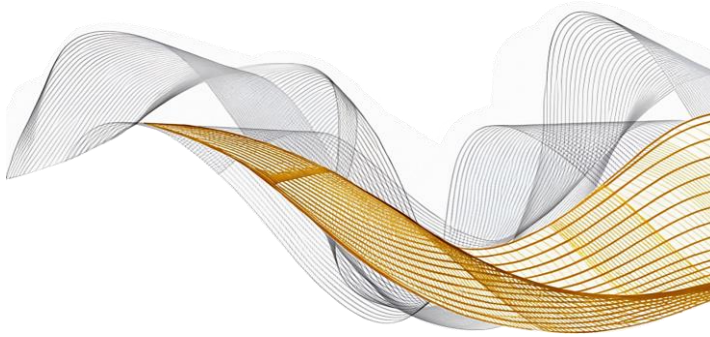


#	1		2		3		4		5		6		7	
1	***-5h ÷ -5***	*	*+3a - 3a =*		*+1(-2) =*		*- 3h ÷-3h =*		*-5(-2) =*		*-1 + 2 =*		*-7b + 7b =*	
2	*+6r ÷ + 2 =*		*-6 x +2 =*		*- (- 9) =*		*+5b(0) =*		*-6(-2) =*		*+ (-2) =*		*-3k +3k =*	
3	***-8 x + 2 =***		*+1 x -2 =*		*+(-2) =*		*-9h ÷ -9h=*		*-7 - 2 =*		*+3 - 2 =*		*+2u - 2u =*	
4	***-x/5 x 5 =***		*-5 x -2 =*		*- 9 + 2 =*		*+7v -7v =*		*-8 + 2 =*		*-4 + 2 =*		***-4b ÷ -4b***	
5	*-7v ÷ v =*		*-7 + 2 =*		*+4 - 2 =*		*+3z -3z =*		*+2a - 2a =*		*+5 - 2 =*		*+2u ÷ -2u =*	
6	*-4 x + 2 =*		*+2u ÷ -2 =*		*-3 - 5 =*		*+2(+0) =*		*-0 + 2 =*		*-6 (+2) =*		*-4p + 4p =*	
7	*+3a - 3a =*		*-3 x +2 =*		*+ 7 + 4 =*		*+21 ÷+21=*		*+3 x -1 =*		*+7 (-2) =*		*+1n(-0) =*	
8	*+0 x - 2t =*		*+0 x -2 =*		*+3a - 3a =*		*+8a ÷ -8=*		*-1 - 8 =*		*-8 (+2) =*		***-x/5 + 5 =***	
9	***-9 + 2 =***		*+9s ÷ -3 =*		*+4d - 4d =*		*+4(-0) =*		*-2 x -2 =*		*-2 + 2 =*		***+x/8 x 8 =***	
10	*+8 - 2 =*		*-8 ÷ -2 =*		*-3f + 3f =*		*-5t + 5t =*		*-7 + 1 =*		*+0 (-2) =*		*+1(-0) =*	
11	*-2 + 3 =*		*-4 ÷ +2 =*		*+ 4 + 2 =*		*-8g + 8g =*		*-1 (-5) =*		*-30 ÷ +5*		*-9(+1) =*	
12	*-6 - 5 =*		*+6 ÷ -3 =*		*-6 (-2) =*		*-1h + 1h=*		*-2 - 9 =*		*-1 (+2) =*		***-5(+1) =***	
13	*+7 - 7 =*		*-18 ÷ -9 =*		*+7 (-8) =*		*-21 ÷ -21=*		*-3 x -2 =*		*-6 - 2 =*		*+3 - 3 =*	
14	*-5 x -1 =*		*-1 + 8 =*		*+k (+0) =*		*-3 + 3 =*		*-0 x -2 =*		*+18 ÷ -8 =*		***-4k + 4k =***	
15	*+7 x -1 =*		*-1 - 4 =*		*- (+9) =*		*+1j -1j =*		*-9 - 2 =*		*-10a ÷-5=*		***+5z - 5z =***	
16	***-4b ÷ +2***		*+3 - 1 =*		*- 9 + 7 =*		*+0(-5) =*		*-8 x -2 =*		*+7 (-1) =*		*-2(+9) =*	
17	*-6d ÷ -d =*		*-2p ÷ +2 =*		*-5(-2) =*		*-56 ÷+ 56=*		*-4 - 2=*		*-1 (+5) =*		***+a (-0) =***	
18	***-0 x +u***		*+1a - 1a =*		*+8 - 3 =*		*-2a + 2 =*		*+5 + 2 =*		*+8 - 1 =*		***+0 (-2) =***	
19	*-9 x -1 =*		*-7h + 7h =*		*+2 - 6 =*		*-(+ 0) =*		*-6 - 2 =*		*-1 x +8 =*		*-7 + 7 =*	
20	*-8 x +6 =*		*+18 ÷ -9 =*		*-3 - 5 =*		*+4(-3) =*		*-7 + 2 =*		*+x/2 (2) =*		***+9a - 9a =***	*

X ÷ ±

Please include all the signs

DN-X2

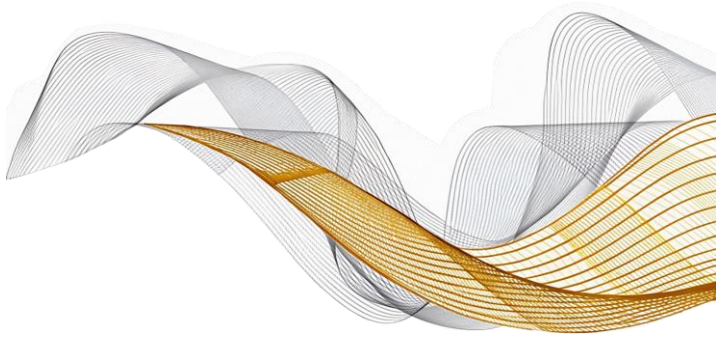


#	1		2		3		4		5		6		7	
1	-5h ÷ -2	*	+3s - 3s =		+1(-b) =		-3g ÷-3g =		-5(-4) =		-1 + 4 =		-3b + 3b =	
2	+3r ÷ + 2 =		-6 x +2 =		- (- 8) =		+5b(1) =		-6(-4) =		+ (-7) =		-3p +3p =	
3	-8 x + 4 =		+0 x -2 =		+(-7) =		-9t ÷ -9=		-7 - 4 =		+3 - 7 =		+2t - 3u =	
4	-x/5 x 10 =		-7 x -2 =		- 5 + 2 =		+7v -7 =		-8 + 4 =		-4 + 7 =		**-8b ÷ -4**	
5	-7v ÷ v =		-6 + 2 =		+2 - 2 =		+2z -3z =		+4a - 4a =		+5 - 7 =		+20 ÷ -2 =	
6	-8 x + 2 =		+2u ÷ -2 =		-3 - 7 =		+4(+0) =		-0 + 4 =		-6 (+7) =		-4z + 4z =	
7	+9a - 3a =		-4 x +2 =		+ 9 + 4 =		+7 ÷+7=		+3 x -1 =		+7 (-7) =		+1(-0) =	
8	+0 x - 2t =		+0 x -2 =		+a - 3a =		+8a ÷ -2=		-1 - 9 =		-8 (+7) =		**-x/4 + 2 =**	
9	-4 + 2 =		+4s ÷ -3 =		+4d - 4d =		+4(-3) =		-5 x -5 =		-2 + 7 =		**-x/4 x 8 =**	
10	+6 - 2 =		-8 ÷ -16 =		-3e + 3e =		-10t + 2t =		-6 + 1 =		+0 (-7) =		+1(-5) =	
11	-2 + 2 =		-4 ÷ +2 =		+ 5 + 2 =		-5g + 8g =		-1 (-6) =		-15 ÷ +5		-8(+1) =	
12	-6 - 2 =		+5 ÷ -5 =		-7 (-2) =		-1h + 1h=		-2 - 3 =		-1 (+8) =		**-5(+6) =**	
13	+a – 7a =		-18 ÷ -9 =		+7 (-2) =		-4 ÷ -3=		-4 x -2 =		-6 - 8 =		+3 - 3 =	
14	-1 x -1 =		-1 + 7 =		+k (+0) =		-3 + 1 =		-0 x -1 =		+16 ÷ -8 =		**-4d + 4d =**	
15	+7 x -1 =		-1 - 2 =		- (+7) =		+1i -1s =		-7 - 2 =		-15a ÷-5=		**+5 - 5z =**	
16	-4b ÷ +2		+4 - 1 =		- 6 + 7 =		+1(-5) =		-6 x -2 =		+7 (-1) =		-2(+1) =	
17	-6d ÷ -d =		-2q ÷ +2 =		-3(-2) =		-1 ÷ +6=		-2 - 2=		-1 (+3) =		**+a (-0) =**	
18	-4 x +u		+1a - 1a =		+7 - 3 =		-2a - 2 =		+6 + 2 =		+9 - 1 =		**+0 (-1) =**	
19	-9 x -1 =		-7g + 7g =		+2 - 5 =		-(+ 0) =		-1 - 2 =		-1 x +9 =		-7 + 7 =	
20	-9 x +9 =		+27 ÷ -9 =		-3 - 3 =		+2(-3) =		-7 + 3 =		+x/2 (4) =		**-x/2 - 2 =**	*

X ÷ ±

Please include all the signs

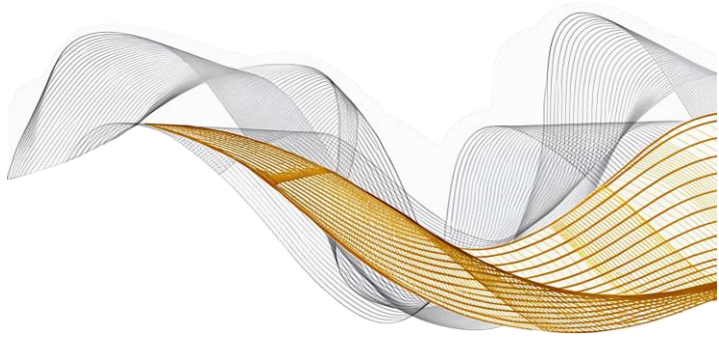
DN-MDC1



#	1		2		3		4	
1	-2 + 1(-4) =	*	-18 – 4 =		–d + d =		+1(-2) – 6 – 4=	
2	-3 + 6 =		-14 + 7 =		+445 – 445 =		(-9) + 1 + 9 =	
3	**+8 – (-7)**		-15 + 14 =		-89 + 89 =		**(-4) + (-7) – (-8) =**	
4	-4 + 5 =		-11 – 5 =		–D + D =		(-18) – (-1) =	
5	-2 + (-9) =		17 + (-18) =		Q + Q =		**(-9) + 11 =**	
6	-1 + (-8) =		+9 – 1(-17) =		-P + P =		**+12 – 1(-2) =**	
7	**-3 + (-9) =**		-14 – (-4) =		L – L =		+6 +1 (-2) =	
8	-2 + 6 =		-5 – (-12) =		-l + l =		+9 –1 (-7) =	
9	-7 + (-3) =		16 + (-15) =		-50/+5 =		**7 – (-2) – 8 =**	
10	**9 – (-5)**		-12 – (-2) =		-5(-9 + 5) + 6 =		(-2) + (-2) +4 =	
11	-1 – 4 =		12 – (-6) =		+ 25/ -5 =		(-2) – (-2) + 5 =	
12	-7 – (-3) =		(-19) + 11 =		-5/10 =		**+1(-2) – 6 – 4=**	
13	**-8 + (- 5) =**		-6 + 1(-9) + 1(-1) =		-8/2 =		(-9) + 1 + 9 =	
14	**-1 + (-6)**		9 – (-4) + 1 =		6 (3 + 5 + 4) – 4 =		(-4) + (-7) – (-8) =	
15	-5 – (- 4) =		+1(-2) – 1(-2) + 1(-4) =		-(- 3) + 5 =		**3 – (- 6) =**	
16	-6 + (-1) =		(-2) + (-2) + 4 =		5 (9 – 4) =		**(-8) – (-1) =**	
17	-5 – (-3) =		(-8) + 9 – (-6) =		- (-4 x – 4) – 6 =		(-2) + (-2) + 4 =	
18	-7 + (-4) =		(-18) – (-1) =		5 (8) + 3 =		**(-8) + 9 – (-6) =**	
19	**-12 + (-18) =**		–a + a =		+1(-6) + 1(-9) + 1(-1) =		**7 – (-2) -8 =**	
20	-11 + (-17) =		b – b =		+9 –1(-4) + 1 =		(-4) + (-7) – (-8) =	*

X ÷ ± **Please include all the signs**

DN-MDC2



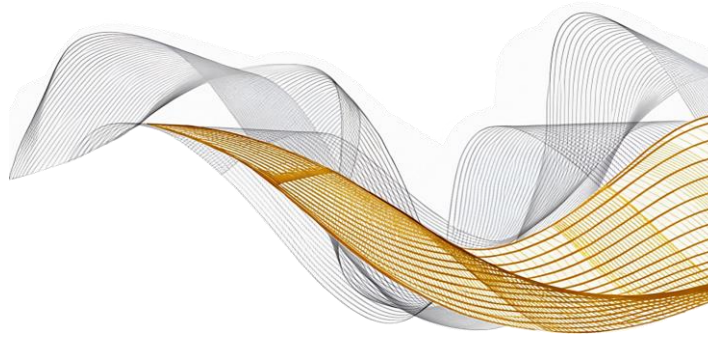
Multiply each of the following by **-1** then **simplify** as much as possible.

#	1		2		3	
1	$ax^2 + bx + c = 0$	*	$(-4) - (-4) =$		***8x - 8x + 12y + 4y = 44 - 20***	
2	$ax^2 - bx + c = 0$		$12 - (-2) =$		$6x - 6x - 4y + 9y = 38 - 12$	
3	$-ax^2 - bx + c = 0$		$mx + 2y + 5x + 7y=$		***2x – 13 = 17***	
4	$-ax^2 + bx - c = 0$		$8x -3y + 7y - 5x =$		$8x - 8x + 12y + 4y = 44 - 20$	
5	$-ax^2 - bx - c = 0$		$-6x +3y + 4x - 7y + 5x - 8y =$		$6x - 6x - 4y + 9y = 38 - 12$	
6	$ax^2 + bx + c = -0$		$7x^2 + 3y^2 - 4x^2 - 5y^2 - 8x^2 - 6y^2 =$		***2x – 13 = 17***	
7	$2x^2 + x + 6 = 8 + 5$		$9x^2 + 5y^2 - 3x^2 - 2y^2 + 4x^2 + y^2 =$		$8x -8x + 12y + 4y = 44 - 20$	
8	$ax^2 + bx + c = 0$		$5x - 15 - 3 + 6 =$		***6x – 6x – 4y + 9y = 38 - 12***	
9	$ax^2 - bx + c = 0$		$mx + 2y + 5x + 7y=$		$2x - 13 = 17$	
10	$-ax^2 - bx + c = 0$		$8x -3y + 7y - 5x =$		$3x + y = 2$	
11	$-ax^2 + bx - c = 0$		$-6x +3y + 4x - 7y + 5x - 8y =$		$4x + 3y = 3$	
12	$-ax^2 - bx - c = 0$		$x + 64 = 8x$		***x + 1 = 2y***	
13	$ax^2 + bx + c = -0$		$6x - 8\,(x + 3) = 10$		$3a -2b = 12$	
14	$2x^2 + x + 6 = 8 + 5$		$3\,(x + 2) - 2\,(x -1) = 12$		***2a + b = 1***	
15	$ax^2 + bx + c = 0$		$3\,(x) + 2\,(x) = 30$		$2x + y = 5$	
16	$-5x^2 + 6x - 6 = -8 + 4$		$15 - 4x = 2(3x + 1) =$		$3x - 4y = 32$	
17	$8x^2 - 4x - 6 = 8 - x$		$4\,(2) - 2(-3) + 3(0) =$		***5x + 2y = 10***	
18	$-2x^2 - x - 6 = 0$		$5a^2 - ab + 5ab - b^2=$		$3x + y = 14$	
19	$(-2) + (-8) =$		$7x - (12x^2\ 18x + 10x - 15) =$		***4x – 4y = 2***	
20	$(-11) + (-7) =$		$6x^2 - 8x + 15x - 20 =$		***7x + 2y = 17***	*

X ÷ ±

Please include all the signs

DN-MDC3

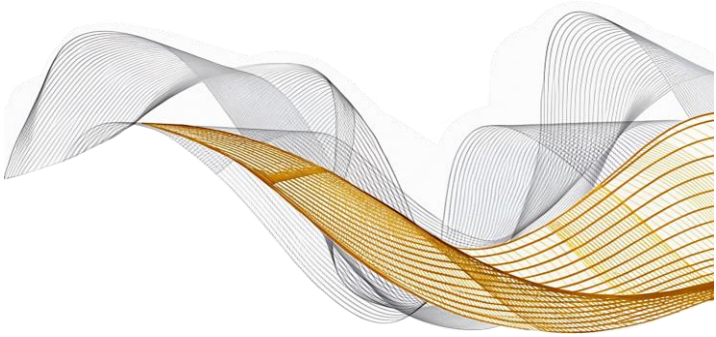


Multiply each of the following by **-1** then **simplify** as much as possible.

#	1		2	
1	$x + y = 5$	*	$2x + 2 + x + 3 + x - 1 = 50$	
2	$xy = 6$		$28 - x + 20 - x + x = 40$	
3	$2x + 3y = 11$		$250 - x + 2x + x = 400$	
4	$4x + 2y = 10$		$2x + 2 + x + 3 + x - 1 = 50$	
5	$3x - 2 = 4$		$7 - x + 35 - x + 25 - x + x = 50$	
6	$x + y \leq 12$		$30 - x + 9 - x + x + 3x = 50$	
7	$x + y \geq 50$		$31 - x + 2x + x + 10 = 55$	
8	$x + y \geq 10$		$1 + 5 + 5 + 15 + 2x + 2x = 56$	
9	$8x + 3y \leq 84$		$18 - x + 9 - x + 10 - x + 5 + 3 + x = 56$	
10	$y + y \geq 600$		$4 - x + 5 - x + 6 - x + 7 + 6 + 4 - x + x = 50$	
11	$2x + y \geq 12$		$7 - x + 35 - x + 25 - x + x = 50$	
12	$14x + 28y \leq 196$		$30 - x + 9 - x + x + 3x = 50$	
13	$x + y = 5$		$31 - x + 2x + x + 10 = 55$	
14	$xy = 6$		$8 - x + 5 - x + 9 - x + 15 + 14 + 2 = 100$	
15	$2x + 3y = 11$		$7 - (2x - 8x + 10x - 15) =$	
16	$4x + 2y = 10$		$6 - 8x + 15x - 20 =$	
17	$x + y = 5$		$8x - 8x + 12y + 4y = 44 - 20$	
18	$x + 2x = 10$		$6x - 6x + x - 4y + 9y = 38 - 12$	
19	$2x - 13 = 17$		$7 - (2x - 8x + 10x - 15) =$	
20	$x/5 - 5 = x/15 + 4$		$2(2x - 3) - (x - 4) < 4$	*

You'v got this!

ALG-S1



Carefully follow the instructions in each question, and **substitute** the given values into the **correct places** in the equations provided.

1. Given $a = 2$, $b = -3$ $c = 0$; evaluate a^c
2. Given $p = 5$, $q = 0$, $r = -3$; calculate the value $2r^3$
3. Given that a = 2, b = -3 and c = 0; find the value of 4a – 2b + 3c
4. If $p = 5$, $q = 0$ and $r = -3$; calculate the value of $4p - qr$
5. Given $m = -2$ and $n = 4$; calculate the value of $(2m + n)(2m - n)$
6. If $a = 2$, $b = -3$ and $c = 4$; calculate (i). $ab - bc$ (ii). $b(a - c)^2$
7. If $a = 2$, $b = 2$ and $c = -3$; find the value of: (i). $a + b + c$ (ii). $b^2 - c^2$
8. If $a * b = a^2 - b$ evaluate; $5 * 2$
9. Calculate the value of t when $r = 2$ and $s = 15$

$$t = \frac{s}{3 + r}$$

10) Calculate the value of F when C is 15

$$F = \frac{9C + 160}{5}$$

11) If $l = -2$, $n = -3$ and $m = 4$; calculate the value of

$$\frac{m + n}{n - m}$$

12) If $a = 4$, $b = -2$ and $c = 3$; calculate the value of

$$\frac{a(b - c)}{bc}$$

13) If $a = 2$, $b = -1$ and $c = 3$; find the value of: (i). $a(b + c)$

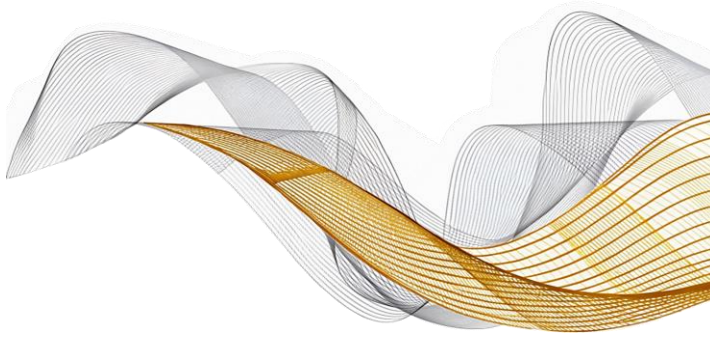
(ii). $$\frac{4b^2 - 2ac}{a + b + c}$$

14) Calculate the value of r, when $p = 6$ and $q = 12$; given that

$$r = \frac{2p^2}{q - 3}$$

You've got this!

ALG-S2



From the given quadratic equation, find the values of a, b and c. Plug them into the quadratic formula.

$$x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$$

1) $6x^2 + 11 = 10$

2) $-5x^2 - 7x + 3 = 0$

3) $3x^2 + 10x - 8 = 0$

4) $-4x^2 + 7x + 5 = 0$

5) $3x^2 + 10x - 8 = 0$

6) $x^2 + y^2 = 24$

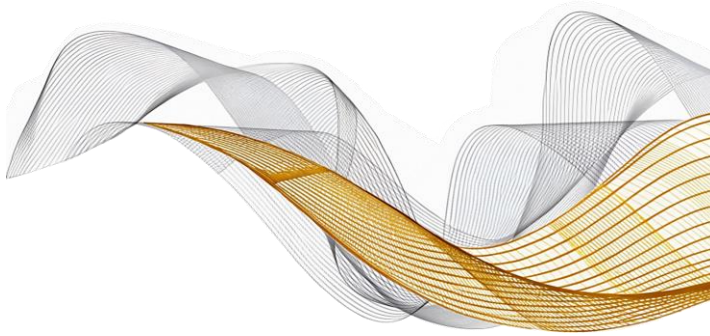
7) $r^2 - 16r - 16 = 0$

8) $x^2 - 6x + 39 = 30.25$

9) $4y^2 - 7y - 3 = 0$

You've got this!

ALG-S3

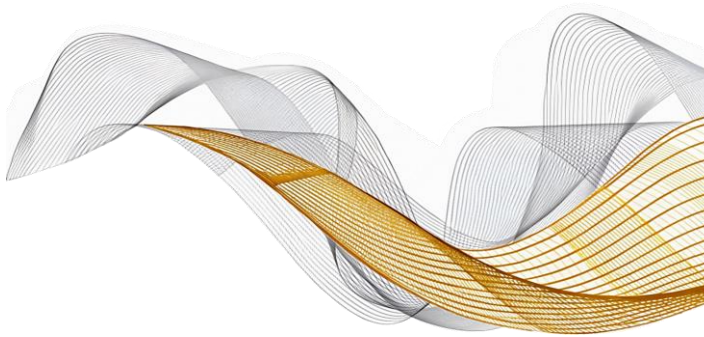


Complete the following exercises.

1) Write the equation $3x^2 + 10x - 8 = 0$ in the form of $a(x + h)^2 + k$, where, $h = b/2a$ and $k = (4ac - b^2)/4$
2) Write the equation $-4x^2 + 7x + 50$ in the form of $a(x + h)^2 + k$, where, $h = b/2a$ and $k = (4ac - b^2)/4$
3) Write $-2x^2 + 7x - 3$ in the form of $k - a(x + h)^2$ where, $h = b/2a$ and $k = (4ac - b^2)/4$
4) Write $3x^2 + 4x + 5$ in the form of $a(x + b)^2 + k$ where, $h = b/2a$ and $k = (4ac - b^2)/4$
5) Write $-2x^2 + 5x + 1$ in the form of $c + a(x + b)^2$ where, $b = b/2a$ and $c = (4ac - b^2)/4$
6) Write $6x^2 - 8x + 7$ in the form of $p(x + q)^2 + r$ where, $q = b/2a$ and $r = (4ac - b^2)/4$
7) Write $-4x^2 + 6x - 3$ in the form of $a(x + p)^2 + q$ where, $p = b/2a$ and $q = (4ac - b^2)/4$
8) Write the function $f(x) = 2x^2 + 6x - 3$ in the form of $a(x + h)^2 + k$ where, $h = b/2a$ and $k = (4ac - b^2)/4$
9) Given the function $f(x) = 4x^2 + 2x - 3$ express $f(x)$ in the form of $a(x + h)^2 + k$ where a, h and k are constants
10) Given $2x^2 - 4x - 9 = a(x + h)^2 + k$ for all values of x, write the equation $2x^2 - 4x - 9$ in the form of $a(x + h)^2 + k$
11) Write $y = 3x^2 - 2x + 1$ in the form of $a(x + p)^2 + q$
12) Write the function $f(x) = -3x^2 + 5x + 4$, in the form of $a(x + p)^2 + q$
13) Write $4x^2 + 3x + 2$ in the form of $a(x + h)^2 + k$
14) Write $9x^2 - 9x + 1$ in the form $a(x + b)^2 + c$, where a, b and c are real numbers
15) Write the expression $3x^2 - 2x - 4$ in the form $f(x) = p(x + q)^2 + r$, where p, q and r are constants
16) Write the expression $4x^2 - 9x + 1$ in the form $a(x + h)^2 + k$, where a, h and k are real numbers
17) Write $f(x) = 4x^2 - 7x + 3$ in the form $f(x) = a(x + b)^2 + c$ where a, b and c are constants
18) Write $3x^2 + 8x - 25$ in the form $a(x + h)^2 + k$ where a, h and k are real numbers

Level 1

ALG-B1

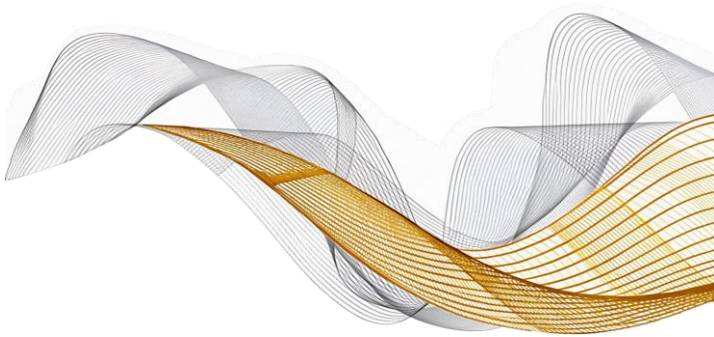


Isolate the variable shown in brackets and make it the subject of the equation.

1. $C = \pi d \quad (d)$
2. $S = \pi dn \quad (d)$
3. $DV = c \quad (V)$
4. $A = \pi rl \quad (l)$
5. $v^2 = 2jk \quad (k)$
6. $d = st \quad (s)$
7. $I = PRT \quad (R)$
8. $xy = 6 \quad (y)$

Level 2

ALG-B2

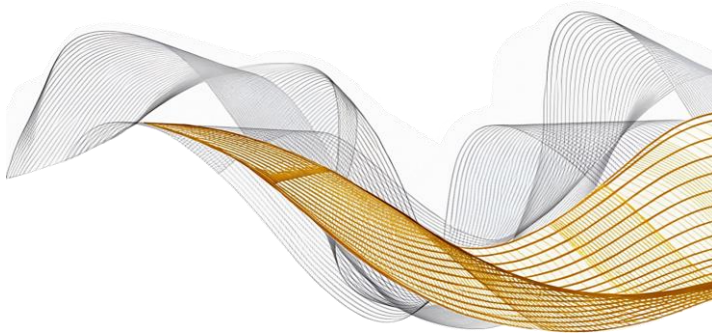


Isolate the variable shown in brackets and make it the subject of the equation.

1. $x = a/y \quad (y)$
2. $I = T/P \quad (P)$
3. $x = u/a \quad (u)$
4. $v = 4/3\pi\, r \quad (r)$
5. $P = RT/V \quad (T)$
6. $d = 0.8667/N \quad (N)$
7. $P = qp/Q \quad (q)$
8. $J = MANGO/34{,}000 \quad (A)$
9. $V = \pi d^2 h/4 \quad (h)$

Level 3

ALG-B3-1

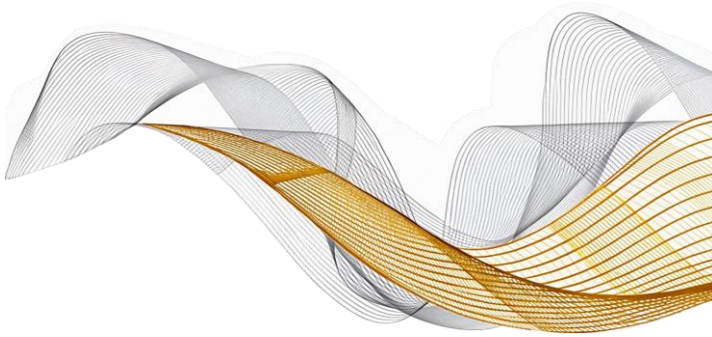


For each equation, first multiply both sides by -2. Then isolate the variable shown in brackets and express the equation with that variable as the subject.

#	1		2	
1	$s = S - 18.9$ (S)	*	$4 - x + 5 - x + 6 - x + 7 + 6 + 4 - x + x = 50$ (x)	
2	$v = u + at$ (t)		$8 - x + 5 - x + 9 - x + 15 + 14 + 2 = 100$ (x)	
3	$n = p + rs$ (r)		$x + 2x = 10$ (x)	
4	$g = ax + c$ (x)		$15 + 12 + 8 + 2x + 3 + 4 = 68$ (x)	
5	$y = x/6 + 19$ (x)		$3(3x + 1) - 10(x - 1) - 35 =$ (x)	
6	$H = c + qL$ (q)		$7(5x - 2) + 3(3x + 2) - 2(2x) =$ (x)	
7	$y = b - cx$ (x)		$2(2x - 3) - (x + 4) \angle 4$ (x)	
8	$E = F - 1.36d$ (d)		$x + 64 = 8x$ (x)	
9	$2x + 2 + x + 3 + x - 1 = 50$ (x)		$6x - 8(x + 3) = 10$ (x)	
10	$28 - x + 20 - x + x = 40$ (x)		$3(x + 2) - 2(x - 1) = 12$ (x)	
11	$250 - x + 2x + x = 400$ (x)		$3(x) + 2(x) = 30$ (x)	
12	$7 - x + 35 - x + 25 - x + x = 50$ (x)		$5 - 4x = 2(3x + 1)$ (x)	
13	$30 - x + 9 - x + x + 3x = 50$ (x)		$4(x) - 2(-3) + 3(0) =$ (x)	
14	$31 - x + 2x + x + 10 = 55$ (x)		$7 - (2x - 8x + 10x - 15) =$ (x)	
15	$1 + 5 + 5 + 15 + 2x + 2x = 56$ (x)		$6 - 8x + 15x - 20 =$ (x)	
16	$18 - x + 9 - x + 10 - x + 5 + 3 + x = 56$ (x)		$8x - 8x + 12y + 4y = 44 - 20$ (x)	*

Level 3

ALG-B3-2

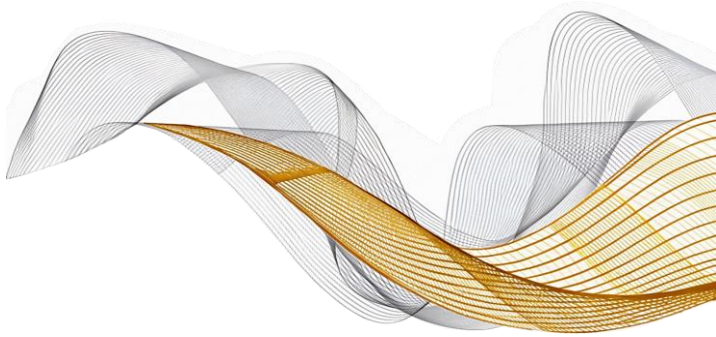


For each equation, first multiply both sides by -2. Then isolate the variable shown in brackets and express the equation with that variable as the subject.

#	1		2	
1	$6x - 6x + x - 4y + 9y = 38 - 12 \quad (y)$	*	$3x - 2 = 4 \quad (x)$	
2	$2x - 13 = 17 \quad (x)$		$x + y \leq 12 \quad (y)$	
3	$3x + y = 2 \quad (y)$		$x + y \geq 50 \quad (x)$	
4	$4x + 3y = 3 \quad (x)$		$x + y \geq 10 \quad (y)$	
5	$x + 1 = 2y \quad (y)$		$8x + 3y \leq 84 \quad (x)$	
6	$3a - 2b = 12 \quad (b)$		$y + y \geq 600 \quad (y)$	
7	$2a + b = 1 \quad (a)$		$2x + y \geq 12 \quad (x)$	
8	$2x + y = 5 \quad (x)$		$14x + 28y \leq 196 \quad (y)$	
9	$3x - 4y = 32 \quad (x)$		$3x - 2 = 4 \quad (x)$	
10	$5x + 2y = 10 \quad (x)$		$x + y \leq 12 \quad (y)$	
11	$3x + y = 14 \quad (y)$		$x + y \geq 50 \quad (x)$	
12	$4x - 4y = 2 \quad (y)$		$x + y \geq 10 \quad (y)$	
13	$7x + 2y = 17 \quad (x)$		$8x + 3y \leq 84 \quad (x)$	
14	$x + y = 5 \quad (y)$		$y + y \geq 600 \quad (y)$	
15	$2x + 3y = 11 \quad (x)$		$3(3x + 1) - 10(x - 1) - 35 = \quad (x)$	
16	$4x + 2y = 10 \quad (y)$		$7(5x - 2) + 3(3x + 2) - 2(2x) = \quad (x)$	*

Level 4

ALG-B4

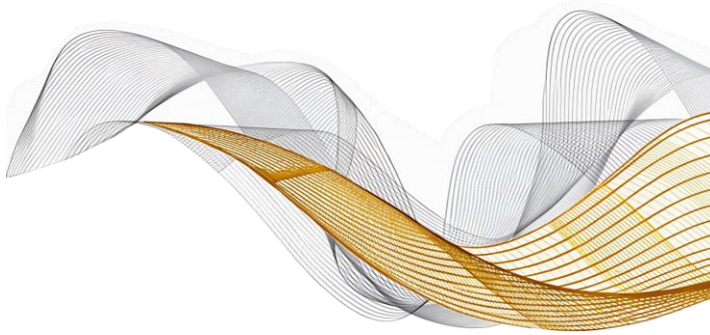


Isolate the variable shown in brackets and make it the subject of the equation.

1. $N = 2R/(R-r)$ (r)
2. $sin = O/(H-t)$ (O)
3. $T = \pi r\ (r + h)$ (h)
4. $Y = ws(T - t)$ (T)
5. $Y = (M - m)/2w$ (M)
6. $L = [13\ (G - g)]/L$ (g)
7. $P = mg + mv^2/r$ (v)
8. $x/5 - 5 = x/15 + 4$ $((x)$

Level 5

ALG-B5

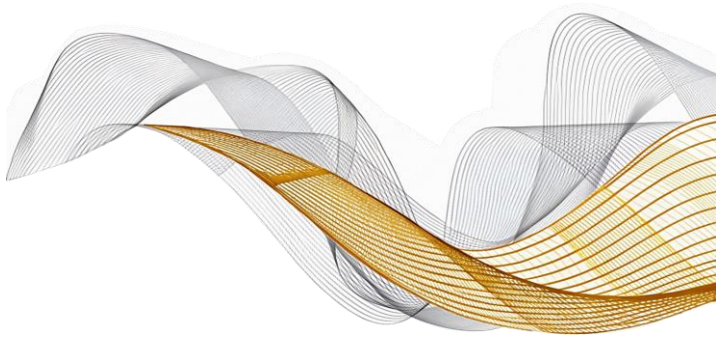


Isolate the variable shown in brackets and make it the subject of the equation.

#	1		2	
1	$V = 2R/(R - r)$ (R)	*	$D/d = \text{sqrt.}\ (f+p)/(f-p)$	
2	$Q = [S\ (C - H)]/C$ (C)		$a = 3/(4t + 5)$ (t)	
3	$V = \text{sqrt.}\ (2gh)$ (h)		$v^2 = 2\pi(x - a)$ (x)	
4	$u = l\ \text{sqrt.}\ y$ (y)		$e = 3(S - Pn)/n(n - l)$ (P)	
5	$t = 2\pi\ \text{sqrt.}\ (l/g)$ (g)		$M = 2\ \text{sqrt.}\ (2hr - h^2)$ (r)	
6	$t = 2\pi\ \text{sqrt.}\ (M/gf)$ (f)		$x = dF/(D - d)$ (d)	
7	$r = \text{cube root}\ 3v/4\pi$ (v)		$D/g = \text{sqrt.}\ (f+p)/(f-p)$	
8	$v = 4/3\ \pi\ r^3$ (r)		$D/d = \text{sqrt.}\ (f+p)/(f-p)$	
9	$P - mg = mv^2/r$ (m)		$a = 3/(4t + 5)$ (t)	
10	$2 = \text{sqrt.}\ [x/(x - y)]$ (x)		$v^2 = 2\pi(x - a)$ (x)	
11	$m = (3q + 10)/(q + 5)$ (q)		$e = 3(S - Pn)/n(n - l)$ (P)	
12	$a = 3/(4t + 5)$ (t)		$D/d = \text{sqrt.}\ (f+p)/(f-p)$	
13	$v^2 = 2\pi(1/x - 1/a)$ (x)		$r = \text{cube root}\ 3v/4\pi$ (r)	
14	$e = 3(S - an)/n(n - l)$ (a)		$v = 4/3\ \pi\ r^3$ (r^3)	
15	$u = 2\ \text{sqrt.}\ (2hr - h^2)$ (r)		$P - mg = mv^2/r$ (v)	
16	$x = dh/(D - d)$ (d)		$v^2 = 2\pi(x - a)$ (a)	*

Please include all the signs

TB-MX1



This tables sheet can be done left to right and right to left or up to down and down to up or sideways – but do it fast!

#	0	9	1	8	2	7	3	6	4	5
9			+9							
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8										
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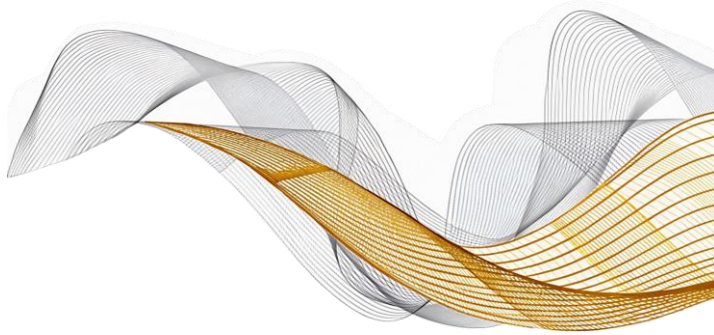
Please include all the signs

TB-MX2



This tables sheet can be done left to right and right to left or up to down and down to up or sideways – but do it fast!

#	10	9	25	4	11	15	8	12	7	3
9										
1										
8										
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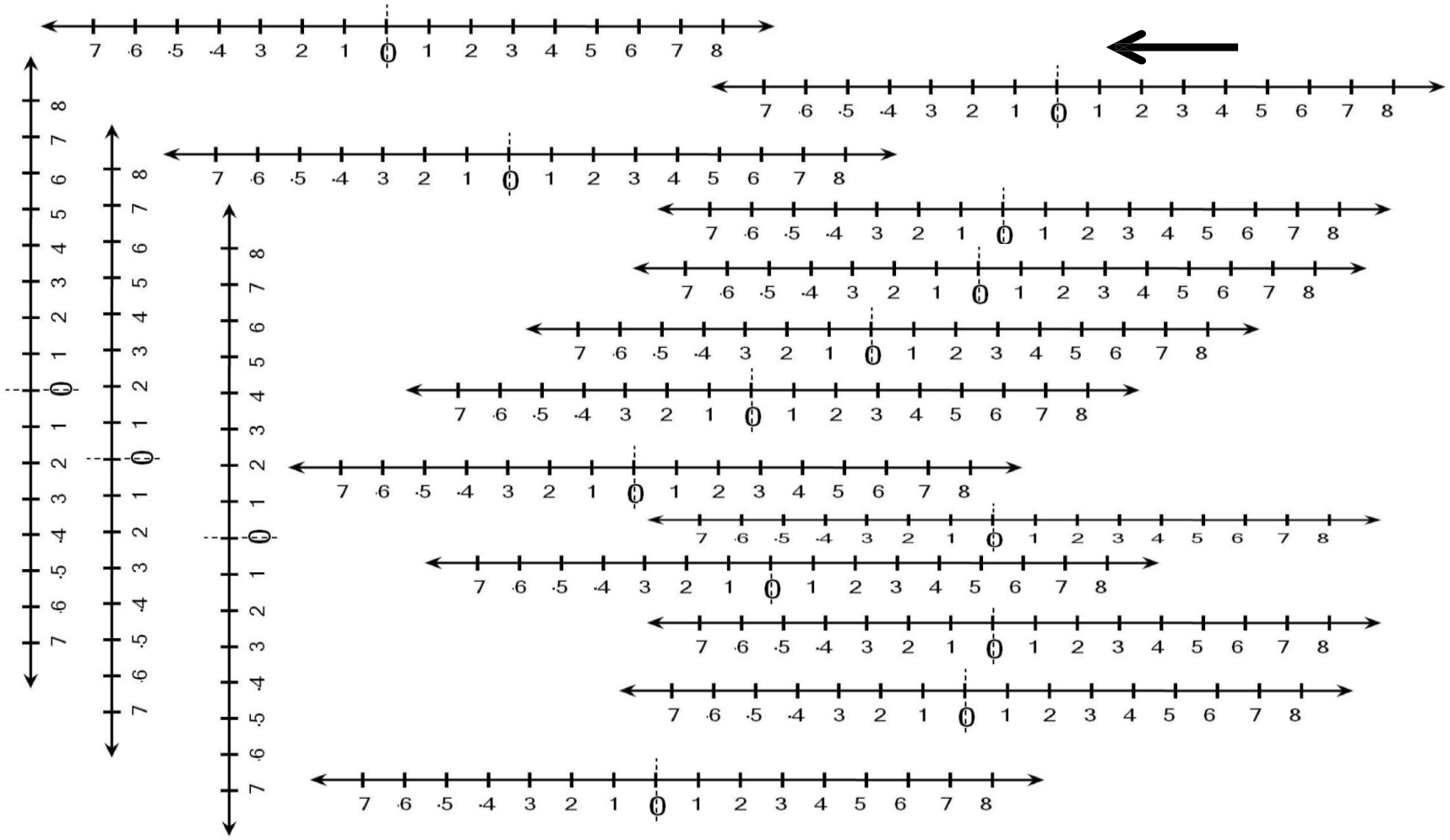
OD-FX1

Fill in the correct + or – signs, and circle the last number line.



OD-FX2

Count how many number lines there are!