

GROW RULES USED FOR DRAFTING AND ADAPTING, IN POLYPATTERN-M2M, **THE BASIC TROUSER BLOCK** BY W. ALDRICH, BASED ON MATHEMATICAL FORMULAS DEFINING THE PATTERN OUTLINE VERTICES, IN RELATION TO BODY MEASUREMENTS

ALGORITHM FORMS RELATING TO THE PLACEMENT OF VERTICES (Page on the right), WHICH DEFINE THE PATTERN OUTLINES OF THE <b>BASIC TROUSER BLOCK</b> (ORIGINATED BY WINIFRED ALDRICH, 1994: 76-77) ADAPTED FOR SCOLIOSIS, IN A 2D CARTESIAN COORDINATE SYSTEM (Table 8.6)			
FORMULA NAMES & VERTEX COORDINATES	ALGORITHM FORMULAS (GROW RULES)		
FRONT LEFT WAIST DART WIDTH	FRONT LEFT HIP WIDTH	MINUS [-]	FRONT LEFT WAIST WIDTH
FRONT RIGHT WAIST DART WIDTH	FRONT RIGHT HIP WIDTH	MINUS [-]	FRONT RIGHT WAIST WIDTH
HALF FRONT LEFT WAIST DART WIDTH	FRONT LEFT WAIST DART WIDTH	MULTIPLIED BY *[0.50]	
HALF FRONT RIGHT WAIST DART WIDTH	FRONT RIGHT WAIST DART WIDTH	MULTIPLIED BY *[0.50]	
DART MOVE FRONT LEFT	FRONT LEFT HIP WIDTH	MULTIPLIED BY *[0.40]	
DART MOVE FRONT RIGHT	FRONT RIGHT HIP WIDTH	MULTIPLIED BY *[0.40]	
FRONT LEFT WAIST DART POSITION TO SIDE	DART MOVE FRONT LEFT	PLUS [ + ]	HALF FRONT LEFT WAIST DART WIDTH
FRONT RIGHT WAIST DART POSITION TO SIDE	DART MOVE FRONT RIGHT	PLUS [ + ]	HALF FRONT RIGHT WAIST DART WIDTH
FRONT LEFT WAIST DART POSITION TO CENTRE	DART MOVE FRONT LEFT	MINUS [-]	HALF FRONT LEFT WAIST DART WIDTH
FRONT RIGHT WAIST DART POSITION TO CENTRE	DART MOVE FRONT RIGHT	MINUS [-]	HALF FRONT RIGHT WAIST DART WIDTH
HALF LEFT KNEE CIRCUMFERENCE	LEFT KNEE CIRCUMFERENCE	MULTIPLIED BY *[0.50]	
HALF RIGHT KNEE CIRCUMFERENCE	RIGHT KNEE CIRCUMFERENCE	MULTIPLIED BY *[0.50]	
HALF LEFT ANKLE CIRCUMFERENCE	LEFT ANKLE CIRCUMFERENCE	MULTIPLIED BY *[0.50]	
HALF RIGHT ANKLE CIRCUMFERENCE	RIGHT ANKLE CIRCUMFERENCE	MULTIPLIED BY *[0.50]	
KNEE MOVE FRONT LEFT	FRONT LEFT HIP WIDTH	MINUS [-]	HALF LEFT KNEE CIRCUMFERENCE
KNEE MOVE FRONT RIGHT	FRONT RIGHT HIP WIDTH	MINUS [-]	HALF RIGHT KNEE CIRCUMFERENCE
KNEE MOVE BACK LEFT	BACK LEFT HIP WIDTH	MINUS [-]	HALF LEFT KNEE CIRCUMFERENCE
KNEE MOVE BACK RIGHT	BACK RIGHT HIP WIDTH	MINUS [-]	HALF RIGHT KNEE CIRCUMFERENCE
ANKLE MOVE FRONT LEFT	FRONT LEFT HIP WIDTH	MINUS [-]	HALF LEFT ANKLE CIRCUMFERENCE
ANKLE MOVE FRONT RIGHT	FRONT RIGHT HIP WIDTH	MINUS [-]	HALF RIGHT ANKLE CIRCUMFERENCE
ANKLE MOVE BACK LEFT	BACK LEFT HIP WIDTH	MINUS [-]	HALF LEFT ANKLE CIRCUMFERENCE
ANKLE MOVE BACK RIGHT	BACK RIGHT HIP WIDTH	MINUS [-]	HALF RIGHT ANKLE CIRCUMFERENCE
1x LEFT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[ - 0.50]	
1y LEFT FRONT			

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2x LEFT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[- 0.50]	
2y LEFT FRONT	FRONT LEFT WAIST DART POSITION TO CENTRE	MULTIPLIED BY *[- 1]	
3x LEFT FRONT		EQUALS [=]	2x LEFT FRONT
3y LEFT FRONT	FRONT LEFT WAIST DART POSITION TO SIDE	MULTIPLIED BY *[- 1]	
4x LEFT FRONT	LEFT HIP DEPTH	MULTIPLIED BY *[- 0.50]	
4y LEFT FRONT	FRONT LEFT HIP WIDTH	MULTIPLIED BY *[- 1]	
5x LEFT FRONT	LEFT HIP DEPTH	MULTIPLIED BY *[0.50]	
5y LEFT FRONT	FRONT LEFT HIP WIDTH	MULTIPLIED BY *[- 1]	
6x LEFT FRONT	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
6y LEFT FRONT		EQUALS [=]	4y LEFT FRONT
7x LEFT FRONT	LEFT KNEE POSITION	MULTIPLIED BY *[ 1 ]	
7y LEFT FRONT	KNEE MOVE FRONT LEFT	MULTIPLIED BY *[- 1]	
8x LEFT FRONT	LEFT OUTSIDE LEG LENGTH	MULTIPLIED BY *[1]	
8y LEFT FRONT	ANKLE MOVE FRONT LEFT	MULTIPLIED BY *[- 1]	
9x LEFT FRONT		EQUALS [=]	8x LEFT FRONT
9y LEFT FRONT	DART MOVE FRONT LEFT	MULTIPLIED BY *[- 1]	
10x LEFT FRONT		EQUALS [=]	8x LEFT FRONT
10y LEFT FRONT			
11x LEFT FRONT		EQUALS [=]	7x LEFT FRONT
11y LEFT FRONT			
12x LEFT FRONT	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
12y LEFT FRONT	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
13x LEFT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[- 0.50]	
13y LEFT FRONT			
14x LEFT FRONT			
14y LEFT FRONT	DART MOVE FRONT LEFT	MULTIPLIED BY *[- 1]	
1x RIGHT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[- 0.50]	
1y RIGHT FRONT			
2x RIGHT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[ 0.50]	

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2y RIGHT FRONT			
3x RIGHT FRONT	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
3y RIGHT FRONT	CROTCH LENGTH	MULTIPLIED BY *[ - 0.30]	
4x RIGHT FRONT	RIGHT KNEE POSITION	MULTIPLIED BY *[ 1 ]	
4y RIGHT FRONT			
5x RIGHT FRONT	RIGHT OUTSIDE LEG LENGTH	MULTIPLIED BY *[1]	
5y RIGHT FRONT			
6x RIGHT FRONT		EQUALS [=]	5x RIGHT FRONT
6y RIGHT FRONT	DART MOVE FRONT RIGHT	MULTIPLIED BY *[1]	
7x RIGHT FRONT		EQUALS [=]	5x RIGHT FRONT
7y RIGHT FRONT	ANKLE MOVE FRONT RIGHT	MULTIPLIED BY *[1]	
8x RIGHT FRONT		EQUALS [=]	4x RIGHT FRONT
8y RIGHT FRONT	KNEE MOVE FRONT RIGHT	MULTIPLIED BY *[1]	
9x RIGHT FRONT		EQUALS [=]	3x RIGHT FRONT
9y RIGHT FRONT	FRONT RIGHT HIP WIDTH	MULTIPLIED BY *[1]	
10x RIGHT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[ 0.50]	
10y RIGHT FRONT		EQUALS [=]	9y RIGHT FRONT
11x RIGHT FRONT	FRONT HIP DEPTH	MULTIPLIED BY *[ - 0.50]	
11y RIGHT FRONT		EQUALS [=]	9y RIGHT FRONT
12x RIGHT FRONT		EQUALS [=]	1x RIGHT FRONT
12y RIGHT FRONT	FRONT RIGHT WAIST DART POSITION TO SIDE	MULTIPLIED BY *[1]	
13x RIGHT FRONT		EQUALS [=]	1x RIGHT FRONT
13y RIGHT FRONT	FRONT RIGHT WAIST DART POSITION TO CENTRE	MULTIPLIED BY *[1]	
14x RIGHT FRONT			
14y RIGHT FRONT	DART MOVE FRONT RIGHT	MULTIPLIED BY *[1]	
BACK LEFT WAIST DART WIDTH	BACK LEFT HIP WIDTH	MINUS [-]	BACK LEFT WAIST WIDTH
BACK RIGHT WAIST DART WIDTH	BACK RIGHT HIP WIDTH	MINUS [-]	BACK RIGHT WAIST WIDTH
QUARTER BACK LEFT WAIST DART WIDTH	BACK LEFT WAIST DART WIDTH	MULTIPLIED BY *[0.25]	
QUARTER BACK RIGHT WAIST DART WIDTH	BACK RIGHT WAIST DART WIDTH	MULTIPLIED BY *[0.25]	

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DART-A MOVE BACK LEFT	BACK LEFT HIP WIDTH	MULTIPLIED BY *[0.30]	
DART-A MOVE BACK RIGHT	BACK RIGHT HIP WIDTH	MULTIPLIED BY *[0.30]	
DART-B MOVE BACK LEFT	BACK LEFT HIP WIDTH	MULTIPLIED BY *[0.56]	
DART-B MOVE BACK RIGHT	BACK RIGHT HIP WIDTH	MULTIPLIED BY *[0.56]	
BACK LEFT WAIST DART-A POSITION TO SIDE	DART-A MOVE BACK LEFT	PLUS [ + ]	QUARTER BACK LEFT WAIST DART WIDTH
BACK RIGHT WAIST DART-A POSITION TO SIDE	DART-A MOVE BACK RIGHT	PLUS [ + ]	QUARTER BACK RIGHT WAIST DART WIDTH
BACK LEFT WAIST DART-A POSITION TO CENTRE	DART-A MOVE BACK LEFT	MINUS [ - ]	QUARTER BACK LEFT WAIST DART WIDTH
BACK RIGHT WAIST DART--A POSITION TO CENTRE	DART-A MOVE BACK RIGHT	MINUS [ - ]	QUARTER BACK RIGHT WAIST DART WIDTH
BACK LEFT WAIST DART-B POSITION TO SIDE	DART-B MOVE BACK LEFT	PLUS [ + ]	QUARTER BACK LEFT WAIST DART WIDTH
BACK RIGHT WAIST DART-B POSITION TO SIDE	DART-B MOVE BACK RIGHT	PLUS [ + ]	QUARTER BACK RIGHT WAIST DART WIDTH
BACK LEFT WAIST DART-B POSITION TO CENTRE	DART-B MOVE BACK LEFT	MINUS [ - ]	QUARTER BACK LEFT WAIST DART WIDTH
BACK RIGHT WAIST DART-B POSITION TO CENTRE	DART-B MOVE BACK RIGHT	MINUS [ - ]	QUARTER BACK RIGHT WAIST DART WIDTH
1x LEFT BACK	BACK HIP DEPTH	MULTIPLIED BY *[ - 0.50]	
1y LEFT BACK			
2x LEFT BACK	BACK HIP DEPTH	MULTIPLIED BY *[ 0.50]	
2y LEFT BACK			
3x LEFT BACK	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
3y LEFT BACK	CROTCH LENGTH	MULTIPLIED BY *[- 0.30]	
4x LEFT BACK	LEFT KNEE POSITION	MULTIPLIED BY *[1]	
4y LEFT BACK			
5x LEFT BACK	LEFT OUSIDE LEG LENGTH	MULTIPLIED BY *[1]	
5y LEFT BACK			
6x LEFT BACK		EQUALS [=]	5x LEFT BACK
6y LEFT BACK	DART-A MOVE BACK LEFT	MULTIPLIED BY *[1]	
7x LEFT BACK		EQUALS [=]	5x LEFT BACK
7y LEFT BACK	ANKLE MOVE BACK LEFT	MULTIPLIED BY *[1]	

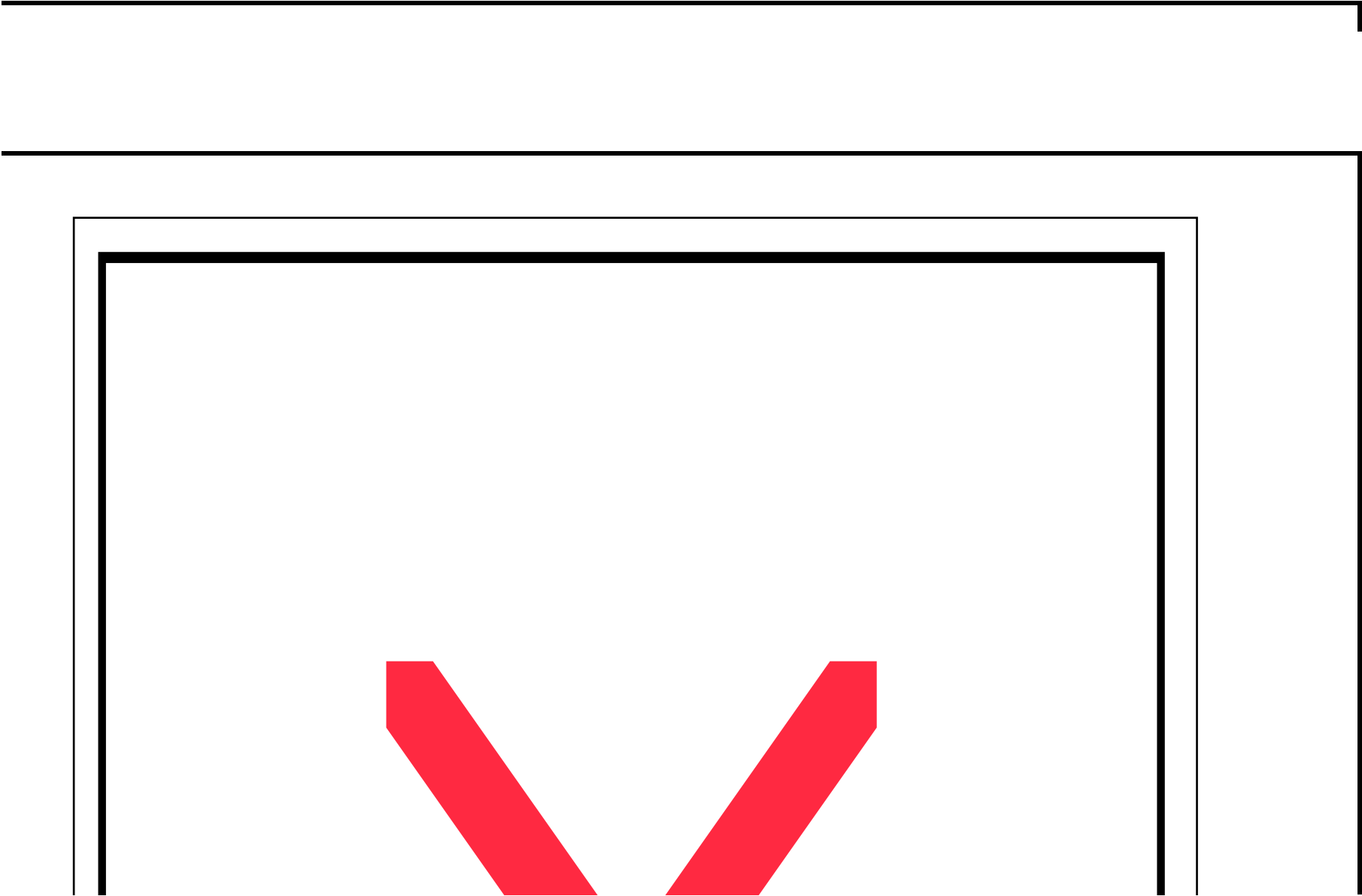
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8x LEFT BACK		EQUALS [=]	4x LEFT BACK
8y LEFT BACK	KNEE MOVE BACK LEFT	MULTIPLIED BY *[1]	
9x LEFT BACK		EQUALS [=]	6x LEFT FRONT
9y LEFT BACK	BACK LEFT HIP WIDTH	MULTIPLIED BY *[1]	
10x LEFT BACK		EQUALS [=]	5x LEFT FRONT
10y LEFT BACK		EQUALS [=]	9y LEFT BACK
11x LEFT BACK		EQUALS [=]	4x LEFT FRONT
11y LEFT BACK		EQUALS [=]	9y LEFT BACK
12x LEFT BACK		EQUALS [=]	11x LEFT BACK
12y LEFT BACK	BACK LEFT WAIST DART-B POSITION TO SIDE	MULTIPLIED BY *[1]	
13x LEFT BACK		EQUALS [=]	11x LEFT BACK
13y LEFT BACK	BACK LEFT WAIST DART-B POSITION TO CENTRE	MULTIPLIED BY *[1]	
14x LEFT BACK		EQUALS [=]	1x LEFT BACK
14y LEFT BACK	BACK LEFT WAIST DART-A POSITION TO SIDE	MULTIPLIED BY *[1]	
15x LEFT BACK		EQUALS [=]	1x LEFT BACK
15y LEFT BACK	BACK LEFT WAIST DART-A POSITION TO CENTRE	MULTIPLIED BY *[1]	
16x LEFT BACK			
16y LEFT BACK	DART-B MOVE BACK LEFT	MULTIPLIED BY *[1]	
17x LEFT BACK	BACK HIP DEPTH	MULTIPLIED BY *[0.10]	
17y LEFT BACK	DART-A MOVE BACK LEFT	MULTIPLIED BY *[1]	
1x RIGHT BACK	BACK HIP DEPTH	MULTIPLIED BY *[- 0.50]	
1y RIGHT BACK			
2x RIGHT BACK		EQUALS [=]	1x RIGHT BACK
2y RIGHT BACK	BACK RIGHT WAIST DART-A POSITION TO CENTRE	MULTIPLIED BY *[- 1]	
3x RIGHT BACK		EQUALS [=]	1x RIGHT BACK
3y RIGHT BACK	BACK RIGHT WAIST DART-A POSITION TO SIDE	MULTIPLIED BY *[- 1]	
4x RIGHT BACK	RIGHT HIP DEPTH	MULTIPLIED BY *[- 0.50]	
4y RIGHT BACK	BACK RIGHT WAIST DART-B POSITION TO CENTRE	MULTIPLIED BY *[- 1]	
5x RIGHT BACK		EQUALS [=]	4x RIGHT BACK
5y RIGHT BACK	BACK RIGHT WAIST DART-B POSITION TO SIDE	MULTIPLIED BY *[- 1]	
6x RIGHT BACK	RIGHT HIP DEPTH	MULTIPLIED BY *[- 0.50]	

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6y RIGHT BACK	BACK RIGHT HIP WIDTH	MULTIPLIED BY *[-1]	
7x RIGHT BACK	RIGHT HIP DEPTH	MULTIPLIED BY *[0.50]	
7y RIGHT BACK		EQUALS [=]	6y RIGHT BACK
8x RIGHT BACK	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
8y RIGHT BACK		EQUALS [=]	6y RIGHT BACK
9x RIGHT BACK	RIGHT KNEE POSITION	MULTIPLIED BY *[1]	
9y RIGHT BACK	KNEE MOVE BACK RIGHT	MULTIPLIED BY *[-1]	
10x RIGHT BACK	RIGHT OUSIDE LEG LENGTH	MULTIPLIED BY *[1]	
10y RIGHT BACK	ANKLE MOVE BACK RIGHT	MULTIPLIED BY *[-1]	
11x RIGHT BACK		EQUALS [=]	10x RIGHT BACK
11y RIGHT BACK	DART-A MOVE BACK RIGHT	MULTIPLIED BY *[-1]	
12x RIGHT BACK		EQUALS [=]	10x RIGHT BACK
12y RIGHT BACK			
13x RIGHT BACK		EQUALS [=]	9x RIGHT BACK
13y RIGHT BACK			
14x RIGHT BACK	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
14y RIGHT BACK	CROTCH LENGTH	MULTIPLIED BY *[0.30]	
15x RIGHT BACK	BACK HIP DEPTH	MULTIPLIED BY *[0.50]	
15y RIGHT BACK			
16x RIGHT BACK			
16y RIGHT BACK	DART-B MOVE BACK RIGHT	MULTIPLIED BY *[-1]	
17x RIGHT BACK	BACK HIP DEPTH	MULTIPLIED BY *[0.10]	
17y RIGHT BACK	DART-A MOVE BACK RIGHT	MULTIPLIED BY *[-1]	

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