LIST OF FIGURES

Figure 1.1 Schematic of	the 2007 MSA-Math	4
•	RT Item Difficulty Comparison Plot	
-	. Year 2007: Grade 3 Form A	51
Figure 1.3 Augmented II	RT Item Difficulty Comparison Plot	
	. Year 2007: Grade 3 Form F	54
Figure 1.4 Augmented II	RT Item Difficulty Comparison Plot	
for Previos Year vs	. Year 2007: Grade 4 Form A	58
	RT Item Difficulty Comparison Plot	
	. Year 2007: Grade 4 Form F	62
	RT Item Difficulty Comparison Plot	
for Previos Year vs	. Year 2007: Grade 5 Form A	66
	RT Item Difficulty Comparison Plot	
	. Year 2007: Grade 5 Form F	69
	RT Item Difficulty Comparison Plot	
	. Year 2007: Grade 6 Form A	71
	RT Item Difficulty Comparison Plot	
	. Year 2007: Grade 6 Form F	73
	IRT Item Difficulty Comparison Plot	
	. Year 2007: Grade 7 Form A	77
	IRT Item Difficulty Comparison Plot	
	. Year 2007: Grade 7 Form F	81
	IRT Item Difficulty Comparison Plot	
	. Year 2007: Grade 8 Form A	85
	IRT Item Difficulty Comparison Plot	
	. Year 2007: Grade 8 Form F	88
	lty Plot of Base Year Form vs. Current Year Form:	
Grade 3 Form A		96
	lty Plot of Base Year Form vs. Current Year Form:	
		96
	tion Item Difficulty Comparison of Year 2006 vs. Year 2007:	
		97
	tion Item Difficulty Comparison of Year 2006 vs. Year 2007:	
		97
	lty Plot of Base Year Form vs. Current Year Form:	
•		100
	lty Plot of Base Year Form vs. Current Year Form:	
=		100
	tion Item Difficulty Comparison of Year 2006 vs. Year 2007:	
		101
	tion Item Difficulty Comparison of Year 2006 vs. Year 2007:	
		101
	lty Plot of Base Year Form vs. Current Year Form:	
_		104
	ltv Plot of Base Year Form vs. Current Year Form:	

Grade 5 Form F	104
Figure 1.24 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 5 Form A	105
Figure 1.25 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 5 Form F	105
Figure 1.26 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 6 Form A	108
Figure 1.27 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 6 Form F	108
Figure 1.28 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 6 Form A	109
Figure 1.29 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 6 Form F	109
Figure 1.30 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 7 Form A	112
Figure 1.31 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 7 Form F	112
Figure 1.32 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 7 Form A	113
Figure 1.33 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 7 Form F	113
Figure 1.34 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 8 Form A	116
Figure 1.35 Item Difficulty Plot of Base Year Form vs. Current Year Form:	
Grade 8 Form F	116
Figure 1.36 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 8 Form A	117
Figure 1.37 Free Calibration Item Difficulty Comparison of Year 2006 vs. Year 2007:	
Grade 8 Form F	117
Figure 3.1 Item Characteristic Curve	139
Figure 3.2 Category Response Curves for a One-Step Item	
Figure 3.3 Category Response Curves for a Two-Step Item	141
Figure B.1 Year 2006 Scael Score Distribution: Grade 3	
Figure B.2 Year 2007 Scael Score Distribution: Grade 3 Form A	
Figure B.3 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 S	
Scores with the Percent Differences between CDFs: Grade 3 Form A	
Figure B.4 Cumulative Distribution Functions (CDFs) for the Year 2007 vs. Year 2007 S	cale
Scores with the Cumulative Percent Differences between CDFs: Grade 3 Form A	227
Figure B.5 Year 2007 Scael Score Distribution: Grade 3 Form F	228
Figure B.6 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 S	cale
Scores with the Percent Differences between CDFs: Grade 3 Form F	
Figure B.7 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 S	
Scores with the Cumulative Percent Differences between CDFs: Grade 3 Form F	
Figure B.8 Year 2006 Scael Score Distribution: Grade 4	230
Figure B 9 Year 2007 Scael Score Distribution: Grade 4 Form A	

Figure B.10 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Percent Differences between CDFs: Grade 4 Form A	. 233
Figure B.11 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 4 Form A	. 233
Figure B.12 Year 2007 Scael Score Distribution: Grade 4 Form F	. 234
Figure B.13 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Percent Differences between CDFs: Grade 4 Form F	. 235
Figure B.14 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 4 Form F	. 235
Figure B.15 Year 2006 Scael Score Distribution: Grade 5	. 236
Figure B.16 Year 2007 Scael Score Distribution: Grade 5 Form A	. 238
Figure B.17 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Percent Differences between CDFs: Grade 5 Form A	. 239
Figure B.18 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 5 Form A	. 239
Figure B.19 Year 2007 Scael Score Distribution: Grade 5 Form F	. 240
Figure B.20 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Percent Differences between CDFs: Grade 5 Form F	. 241
Figure B.21 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 5 Form F	. 241
Figure B.22 Year 2006 Scael Score Distribution: Grade 6	. 242
Figure B.23 Year 2007 Scael Score Distribution: Grade 6 Form A	. 244
Figure B.24 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Percent Differences between CDFs: Grade 6 Form A	. 245
Figure B.25 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 6 Form A	
Figure B.26 Year 2007 Scael Score Distribution: Grade 6 Form F	. 246
Figure B.27 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Percent Differences between CDFs: Grade 6 Form F	
Figure B.28 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	ale
Scores with the Cumulative Percent Differences between CDFs: Grade 6 Form F	
Figure B.29 Year 2006 Scael Score Distribution: Grade 7	
Figure B.30 Year 2007 Scael Score Distribution: Grade 7 Form A	
Figure B.31 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Percent Differences between CDFs: Grade 7 Form A	
Figure B.32 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Cumulative Percent Differences between CDFs: Grade 7 Form A	
Figure B.33 Year 2007 Scael Score Distribution: Grade 7 Form B	. 252
Figure B.34 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Percent Differences between CDFs: Grade 7 Form B	
Figure B.35 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Cumulative Percent Differences between CDFs: Grade 7 Form B	
Figure B.36 Year 2006 Scael Score Distribution: Grade 8	
Figure B.37 Year 2007 Scael Score Distribution: Grade 8 Form A	
Figure B.38 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007 Sc	
Scores with the Percent Differences between CDEs: Grade & Form A	257

Figure B.39 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007	Scale
Scores with the Cumulative Percent Differences between CDFs: Grade 8 Form A	257
Figure B.40 Year 2007 Scael Score Distribution: Grade 8 Form B	258
Figure B.41 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007	Scale
Scores with the Percent Differences between CDFs: Grade 8 Form B	259
Figure B.42 Cumulative Distribution Functions (CDFs) for the Year 2006 vs. Year 2007	Scale
Scores with the Cumulative Percent Differences between CDFs: Grade 8 Form B	259