

# Table of Contents

<b>Introduction</b> .....	<b>i–x</b>
What is <i>Engaging Mathematics, Volume II: Grade 7?</i> .....	iv
What is found in an Engaging Mathematics TEKS-based activity? .....	v
Texas Essential Knowledge and Skills (TEKS) Alignment Chart .....	vi–ix
<b>Rational Number Operations</b> .....	<b>1–20</b>
Classifying Rational Numbers .....	2–3
Rational Number Operations, Activity 1 .....	4–5
Rational Number Operations, Activity 2 .....	6–8
Rational Number Operations, Activity 3 .....	10–11
Rational Number Operations, Activity 4 .....	12–13
Rational Number Operations, Activity 5 .....	14–15
Rational Number Operations, Activity 6 .....	16–17
Rational Number Operations, Activity 7 .....	18–20
<b>Percents</b> .....	<b>22–40</b>
Solving Problems Involving Percents, Activity 1 .....	22–24
Solving Problems Involving Percents, Activity 2 .....	26–27
Solving Problems Involving Percents, Activity 3 .....	28–29
Solving Problems Involving Percent Increase, Activity 1 .....	30–31
Solving Problems Involving Percent Increase, Activity 2 .....	32–34
Solving Problems Involving Percent Decrease, Activity 1 .....	36–37
Solving Problems Involving Percent Decrease, Activity 2 .....	38–40
<b>Representing Linear Relationships</b> .....	<b>42–65</b>
Unit Rate, Activity 1 .....	42–43
Unit Rate, Activity 2 .....	44–45
Unit Rate, Activity 3 .....	46–47
Representing Constant Rates of Change, Activity 1 .....	48–49
Representing Constant Rates of Change, Activity 2 .....	50–51
Representing Constant Rates of Change, Activity 3 .....	52–53
Constant of Proportionality, Activity 1 .....	54–55
Constant of Proportionality, Activity 2 .....	56–57
Constant of Proportionality, Activity 3 .....	58–59
Representing Linear Relationships, Activity 1 .....	60–61
Representing Linear Relationships, Activity 2 .....	62–63
Representing Linear Relationships, Activity 3 .....	64–65
<b>Equations and Inequalities</b> .....	<b>66–109</b>
Writing Equations from Situations .....	66–67
Writing Situations from Equations .....	68–70
Modeling Equations, Activity 1 .....	72–73
Modeling Equations, Activity 2 .....	74–76
Solving Equations, Activity 1 .....	78–80
Solving Equations, Activity 2 .....	82–83
Representing Solutions of Equations on Number Lines .....	84–86

Equations Representing Geometric Relationships, Activity 1 .....	88–89
Equations Representing Geometric Relationships, Activity 2 .....	90–91
Writing Inequalities from Situations .....	92–94
Writing Situations from Inequalities .....	96–97
Solving Inequalities, Activity 1 .....	98–99
Solving Inequalities, Activity 2 .....	100–101
Representing Solutions of Inequalities on Number Lines .....	102–104
Solving Equations and Inequalities .....	106–109
<b>Similar Figures .....</b>	<b>110–119</b>
Similar Figures, Activity 1.....	110–111
Similar Figures, Activity 2.....	112–113
Similar Figures, Activity 3.....	114–115
Solving Problems Involving Similar Figures, Activity 1 .....	116–117
Solving Problems Involving Similar Figures, Activity 2 .....	118–119
<b>Circles .....</b>	<b>120–135</b>
Pi, Activity 1 .....	120–121
Pi, Activity 2 .....	122–124
Solving Problems Involving Circumference .....	126–127
Area of Circles .....	128–130
Solving Problems Involving Area of Circles, Activity 1.....	132–133
Solving Problems Involving Area of Circles, Activity 2.....	134–135
<b>Measurement: Area and Volume .....</b>	<b>136–159</b>
Convert Between Measurement Systems, Activity 1 .....	136–137
Convert Between Measurement Systems, Activity 2 .....	138–139
Area of Composite Figures, Activity 1 .....	140–141
Area of Composite Figures, Activity 2 .....	142–144
Surface Area of Prisms.....	146–147
Surface Area of Pyramids .....	148–149
Volume of Prisms, Activity 1 .....	150–151
Volume of Prisms, Activity 2 .....	152–153
Volume of Prisms and Pyramids, Activity 1 .....	154–155
Volume of Prisms and Pyramids, Activity 2 .....	156–157
Volume of Prisms and Pyramids, Activity 3 .....	158–159
<b>Probability .....</b>	<b>160–198</b>
Simple Events: Sample Spaces .....	160–161
Simple Events: Experimental vs. Theoretical Probability .....	162–164
Simple Events, Activity 1.....	166–168
Simple Events, Activity 2.....	170–172
Simple Events: Simulations .....	174–175
Compound Events: Sample Spaces, Activity 1 .....	176–178
Compound Events: Sample Spaces, Activity 2 .....	180–181
Simple and Compound Events, Activity 1.....	182–184
Simple and Compound Events, Activity 2.....	186–187

Compound Events, Activity 1 .....	188–189
Compound Events, Activity 2 .....	190–192
Compound Events, Activity 3 .....	194–195
Compound Probability: Simulations .....	196–198
<b>Data .....</b>	<b>200–227</b>
Solving Problems Using Data, Activity 1 .....	200–202
Solving Problems Using Data, Activity 2 .....	204–206
Solving Problems Using Bar Graphs .....	208–209
Solving Problems Using Stem-and-Leaf Plots .....	210–211
Solving Problems Using Circle Graphs .....	212–213
Solving Problems Using Dot Plots, Activity 1 .....	214–216
Solving Problems Using Dot Plots, Activity 2 .....	218–220
Solving Problems Using Box Plots, Activity 1 .....	222–223
Solving Problems Using Box Plots, Activity 2 .....	224–225
Solving Problems Using Box Plots, Activity 3 .....	226–227
<b>Personal Financial Literacy .....</b>	<b>228–249</b>
Income Tax .....	228–229
Sales Tax .....	230–232
Personal Budget, Activity 1 .....	234–235
Personal Budget, Activity 2 .....	236–238
Net Worth .....	240–242
Family Budget .....	244–245
Simple and Compound Interest .....	246–247
Monetary Incentives .....	248–249