

# Fractions and Decimals

By Bill Davidson

<b>Fractions</b>	<b>Standard(s)</b>	<b>Pages</b>
Equal Parts	1.G.2, 2.G.3	1 – 2
Halves and quarters	1.G.2, 2.G.3	3 – 4
Halves and quarters (2)	1.G.2, 2.G.3	5 – 6
Halves, thirds, and fourths	2.G.3	7 – 8
Parts of a whole	3.NF.1	9 – 10

  

<b>Whole Number/Fraction Equivalency</b>	<b>Standard(s)</b>	<b>Pages</b>
Make 1 whole	3.NF.3	11 – 12
Express whole numbers as fractional units	3.NF.3	13 – 14
Express fractions as whole numbers	3.NF.3	15 – 16
Whole number/fraction equivalency	3.NF.3	17 – 18

  

<b>Equivalent Fractions</b>	<b>Standard(s)</b>	<b>Pages</b>
Unit becomes bigger (denominators 12 and under)	3.NF.3, 4.NF.1	19 – 20
Unit becomes bigger (denominators 15 and under)	3.NF.3, 4.NF.1	21 – 22
Unit becomes bigger (denominators 18 and under)	4.NF.1	23 – 24
Unit becomes smaller (denominators 12 and under)	3.NF.3, 4.NF.1	25 – 26
Unit becomes smaller (denominators 15 and under)	3.NF.3, 4.NF.1	27 – 28
Unit becomes smaller (denominators 18 and under)	4.NF.1	29 – 30
Unit becomes smaller (denominators 24 and under)	4.NF.1	31 – 32
Unit becomes bigger or smaller (denominators 12 and under)	3.NF.3, 4.NF.1	33 – 34
Unit becomes bigger or smaller (denominators 15 and under)	3.NF.3, 4.NF.1	35 – 36

  

<b>Simplifying Fractions</b>	<b>Standard(s)</b>	<b>Pages</b>
Factors of 24, 36, 48, and 72	4.NF.1	37 – 38
Simplify fractions with denominators 20 and under	4.NF.1	39 – 40
Simplify fractions with denominators 25 and under	4.NF.1	41 – 42
Simplify fractions with denominators 45 and under	4.NF.1	43 – 44
Simplify fractions with denominators 100 and under	4.NF.1	45 – 46

  

<b>Mixed numbers and Improper Fractions</b>	<b>Standard(s)</b>	<b>Pages</b>
Convert improper fractions to whole or mixed numbers	5.NF.3	47 – 48
Convert mixed numbers to improper fractions	5.NF.3	49 – 50
Divide whole numbers to make whole or mixed numbers	5.NF.3	51 – 52

  

<b>Comparing Fractions and Mixed Numbers</b>	<b>Standard(s)</b>	<b>Pages</b>
Compare unit fractions and whole numbers	3.NF.3	53 – 54
Compare fractions with like denominators and whole numbers	3.NF.3	55 – 56
Compare fractions with the same numerator	3.NF.3	57 – 58
Compare fractions by reasoning	3.NF.3	59 – 60
Compare fractions by finding a common denominator	4.NF.2	61 – 62

Compare fractions and mixed numbers by reasoning	4.NF.2	63 – 64
Compare mixed numbers and improper fractions	4.NF.2	65 – 66
Compare fraction expressions to 1	5.NF.2	67 – 68

### **Adding Fractions and Mixed Numbers**

	<b>Standard(s)</b>	<b>Pages</b>
The sum of fractions	4.NF.3	69 – 70
Add fractions with like denominators	4.NF.3	71 – 72
Add fractions in which one denominator changes	4.NF.3	73 – 74
Add fractions in which one denominator changes (2)	4.NF.3	75 – 76
Add fractions in which both denominators change	5.NF.1	77 – 78
Add fractions in which both denominators change (2)	5.NF.1	79 – 80
Add mixed numbers and whole numbers	5.NF.1	81 – 82
Add mixed numbers and fractions with the same denominators	4.NF.3	83 – 84
Add mixed numbers with the same denominator	4.NF.3	85 – 86

### **Subtracting Fractions and Mixed Numbers**

	<b>Standard(s)</b>	<b>Pages</b>
Subtract fractions with like denominators	4.NF.3	87 – 88
Subtract fractions in which one denominator changes	4.NF.3	89 – 90
Subtract fractions in which one denominator changes (2)	4.NF.3	91 – 92
Subtract fractions in which both denominators change	5.NF.1	93 – 94
Subtract a fraction from a whole number	4.NF.3	95 – 96
Subtract fractions from mixed numbers (same denominator)	4.NF.3	97 – 98
Subtract mixed numbers with the same denominator	4.NF.3	99 – 100
Subtract mixed numbers from whole numbers	5.NF.1	101 – 102

### **Add and Subtract Fractions and Mixed Numbers**

	<b>Standard(s)</b>	<b>Pages</b>
Add and subtract fractions that are equivalent to whole numbers	4.NF.3	103 – 104
Add or subtract a fraction to or from a whole number	4.NF.3	105 – 106
Add and subtract mixed numbers and whole numbers	5.NF.1	107 – 108

### **Multiplying Whole #s by Fractions and Mixed Numbers**

	<b>Standard(s)</b>	<b>Pages</b>
Use repeated addition to multiply whole numbers by unit fractions	4.NF.4	109 – 110
Multiply whole numbers by unit fractions	4.NF.4	111 – 112
Multiply whole numbers by unit fractions (2)	4.NF.4	113 – 114
Multiply whole numbers by non-unit fractions	4.NF.4	115 – 116
Multiply whole numbers by non-unit fractions (2)	4.NF.4	117 – 118
Use repeated addition to multiply non-unit fractions	4.NF.4	119 – 120
Fraction of a set	5.NF.4	121 – 122
Multiply fractions by whole numbers	5.NF.4	123 – 124
Multiply whole numbers by mixed numbers	4.NF.4	125 – 126

### **Multiplying Fractions by Fractions**

	<b>Standard(s)</b>	<b>Pages</b>
Multiply unit fractions by unit fractions	5.NF.4	127 – 128
Multiply unit fractions by non-unit fractions	5.NF.4	129 – 130
Multiply non-unit fractions by non-unit fractions	5.NF.4	131 – 132

<b>Dividing with Fractions and Mixed Numbers</b>	<b>Standard(s)</b>	<b>Pages</b>
Fractions as division	5.NF.3	133 – 134
Divide whole numbers by unit fractions	5.NF.7	135 – 136
Divide unit fractions by whole numbers	5.NF.7	137 – 138
Divide fractions by fractions	6.NS.1	139 – 140
Fractions divided by mixed numbers	6.NS.1	141 – 142
<b>Tenths</b>	<b>Standard(s)</b>	<b>Pages</b>
Tenths	4.NF.6	143 – 144
Tenths (2)	4.NF.6	145 – 146
Tenths (3)	4.NF.6	147 – 148
Expanded form with tenths	4.NF.6	149 – 150
Make the next whole	4.NF.6	151 – 152
Convert mixed numbers to decimals (tenths)	5.NBT.3	153 – 154
<b>Hundredths</b>	<b>Standard(s)</b>	<b>Pages</b>
Factors of 100	5.NBT.3	155 – 156
Hundredths	4.NF.5, 4.NF.6	157 – 158
Hundredths (2)	4.NF.6	159 – 160
Hundredths (3)	4.NF.6	161 – 162
Expanded form with hundredths	4.NF.6	163 – 164
Hundredths (4)	5.NBT.3	165 – 166
Express fractions as decimals	5.NF.5, 5.NF.6	167 – 168
Convert mixed numbers to decimals (hundredths)	6.NS.6	169 – 170
<b>Thousandths</b>	<b>Standard(s)</b>	<b>Pages</b>
Thousandths	5.NBT.3	171 – 172
Thousandths (2)	5.NBT.3	173 – 174
Thousandths (3)	5.NBT.3	175 – 176
Thousandths (4)	5.NBT.3	177 – 178
Factors of 1,000	7.NS.2	179 – 180
Equivalent unit fractions (thousandths)	7.NS.2	181 – 182
Equivalent non-unit fractions (thousandths)	7.NS.2	183 – 184
Express fractions with a denominator of 1,000 as decimals	7.NS.2	185 – 186
Express fractions with a denominator of 8 as decimals	7.NS.2	187 – 188
Express fractions with a denominator of 40 as decimals	7.NS.2	189 – 190
<b>Fraction, Mixed Number, and Decimal Equivalency</b>	<b>Standard(s)</b>	<b>Pages</b>
Convert mixed numbers to decimals (tenths and hundredths)	5.NBT.3	191 – 192
Write decimals as fractions in their simplest form	7.NS.2	193 – 194
Write decimals as fractions in their simplest form (2)	7.NS.2	195 – 196
Write decimals as fractions in their simplest form (3)	7.NS.2	197 – 198
Write unit fractions as decimals	7.NS.2	199 – 200
Unit fractions as decimals and decimals as simplified fractions	7.NS.2	201 – 202
Fractions as decimals (denominators that are multiples of 100)	7.NS.2	203 – 204

## **Adding Decimals**

	<b>Standard(s)</b>	<b>Pages</b>
Add tenths and hundredths	4.NF.6	205 – 206
Add tenths and hundredths (2)	4.NF.6	207 – 208
Add ones, tenths, and hundredths	4.NF.6	209 – 210
Add ones, tenths, and hundredths (2)	4.NF.6	211 – 212
Add ones, tenths, hundredths, and thousandths	5.NBT.3	213 – 214
Add decimals with thousandths	5.NBT.7	215 – 216
Add decimals with thousandths (2)	5.NBT.7	217 – 218

## **Subtracting Decimals**

	<b>Standard(s)</b>	<b>Pages</b>
Subtract ones, tenths, hundredths, and thousandths	5.NBT.3	219 – 220
Subtract decimals with thousandths	5.NBT.7	221 – 222
Subtract decimals with thousandths (2)	5.NBT.7	223 – 224
Subtract decimals with thousandths (3)	5.NBT.7	225 – 226

## **Multiplying with Decimals**

	<b>Standard(s)</b>	<b>Pages</b>
Multiply decimals	5.NBT.7	227 – 228
Multiply decimals (2)	5.NBT.7	229 – 230
Multiply decimals (3)	5.NBT.7	231 – 232
Connect decimal and fraction multiplication (tenths)	5.NBT.7	233 – 234
Multiply by tenths	5.NBT.7	235 – 236
Connect decimal and fraction multiplication (tenths and hundredths)	5.NBT.7	237 – 238
Multiply by hundredths	5.NBT.7	239 – 240
Multiply by tenths and hundredths	5.NBT.7	241 – 242
Multiply decimals by multiples of 10	6.NS.3	243 – 244

## **Dividing with Decimals**

	<b>Standard(s)</b>	<b>Pages</b>
Divide decimals	5.NBT.7	245 – 246
Divide decimals (2)	5.NBT.7	247 – 248
Divide decimals (3)	5.NBT.7	249 – 250
Connect dividing unit fractions to dividing by 0.1 and 0.01	5.NBT.7	251 – 252
Divide by tenths	5.NBT.7	253 – 254
Divide by hundredths	5.NBT.7	255 – 256
Divide by tenths and hundredths	5.NBT.7	257 – 258