Extra Practice Sample Solutions

Master 3.38a

Extra Practice 1 – Master 3.28

Lesson 1: Patterns in Multiplication and Division

**1.** 9 × 7 = 63; 63 days

**2. a)** 8 × 9 = 72; 9 × 8 = 72; 72 ÷ 9 = 8; 72 ÷ 8 = 9

 **b)** 6 × 8 = 48; 8 × 6 = 48; 48 ÷ 6 = 8; 48 ÷ 8 = 6

**3.** The product 7 × 9 is 7 more than the product
7 × 8. So, 7 × 9 = 56 + 7 = 63

**4. a)** 0 **b)** 25 **c)** 12 **d)** 8 **e)** 28 **f)** 0

**5. a)** 9 **b)** 9 **c)** 9 **d)** 1 **e)** 0 **f)** 9

**6.** 8 × 7 = 56; 56 markers

**7.** 72 ÷ 8 = 9; 9 students

**8. a)** 5 × 5 = 25 **b)** 7 × 8 = 56 **c)** 4 × 8 = 32

**9. a)** 8 **b)** 30 **c)** 6 **d)** 45 **e)** 0 **f)** 0

Extra Practice 2 – Master 3.29

Lesson 2: Other Strategies for Multiplying and Dividing

1. a) 2 × 7 = 14; 4 × 7 = 28

 **b)** 3 × 6 = 18; 6 × 6 = 36

 **c)** 4 × 8 = 32; 8 × 8 = 64

**2.** Arrays may vary. Students may draw:

 a) 4 rows of 7 **b)** 6 rows of 6

 c) 8 rows of 8

3. a) I could use 8 × 7 = 56; then double 56

 **b)** 8 × 14 = 56 + 56 = 112

4. a) 36 ÷ 4 = 9; 9 teams

 **b)** One-half of 36 is 18; 18 students are not in Grade 5.

 **c)** 36 ÷ 6 = 6; 6 students

5. a) $8 × 8 = $64

 **b)** $8 × 2 = $16; $16 × 2 = $32; $32 × 2 = $64

**6.** 3 × 6 = 18; so I double 3 to get 6 × 6, and double 18 to get 36: 6 × 6 = 36

**7. a)** 8  **b)** 5 **c)** 18

**8.** 72 ÷ 2 = 36; 36 ÷ 2 = 18; 18 ÷ 2 = 9;
so, 72 ÷ 8 = 9

Extra Practice 3 – Master 3.30

Lesson 3: Multiplying with
Multiples of 10

**1. a)** 210 **b)** 450 **c)** 240 **d)** 300

**2. a)** 420 **b)** 720 **c)** 630 **d)** 560 **e)** 5600

 **f)** 56 000

**3. a)** 1200 **b)** 2500 **c)** 4200

 **d)** 2400 **e)** 450 **f)** 42 000

4. 1200 cm

**5. a)** $50 **b)** $1300 **c)** $2300

**6.** 6 × 6 = 36, so 6 × 6000 = 36 000
6 × 5 = 30, so 6 × 5000 = 30 000; the product of 6 and 5 is a multiple of 10

**7.** $310

**8.** Yes, because 4 × 400 = 1600, which is greater than 1500

Extra Practice 4 – Master 3.31

Lesson 4: Estimating Products to Solve Problems

**1. a)** 70 **b)** 90 **c)** 30 **d)** 90

**2. a)** 500 **b)** 700 **c)** 900 **d)** 900

**3.** Answers may vary.

 a) 30 × 70 = 2100 b) 80 × 60 = 4800

4. a) 70 × 50 = 3500; product is greater than 3500 because both factors were rounded down

 b) 70 × 40 = 2800; product is less than 3500 because both factors were rounded up

5. a) 30 × 70 = 2100; I cannot tell because one number was rounded down and the other number was rounded up

 b) 80 × 70 = 5600; an underestimate because both numbers were rounded down

**6.** 36 × 18 is about 35 × 20 = 700; there are about 700 tables in the library

7. a) 72 × 7 is about 70 × 7 = 490

 b) 30 × 490 is about 30 × 500 = 15 000

**8.** 70 × 50 = 3500; so one question might be 71 × 49

Extra Practice 5 – Master 3.32

Lesson 5: Using Mental Math to Multiply

**1.** a) 18 × 7 = 126 **b)** 14 × 9 = 126

**2.** Diagrams may vary.

 **a)** 280 **b)** 414 **c)** 255 **d)** 272

3. a) 14 × 45 = 7 × 90 = 630

 b) 25 × 18 = 50 × 9 = 450

4. a) 50 × 18 = 100 × 9 = 900

 b) 25 × 20 = 50 × 10 = 500

 c) 32 × 25 = 16 × 50 = 8 × 100 = 800

**5.** 42 × 50¢ = 21 × 100¢ = $21

**6. a)** 2793 **b)** 4518 **c)** 1200 **d)** 682

Extra Practice Sample Solutions continued

Master 3.38b

Extra Practice 6 – Master 3.33

Lesson 6: Multiplying 2-Digit Numbers

**1.** a) (30 + 4) × (60 + 5) **b)** (50 + 6) × (80 + 9)

**2.** 72 × 58 = (70 + 2) × (50 + 8)
 = (70 × 50)+(70 × 8)+(2 × 50) + (2 × 8)
 = 3500 + 560 + 100 + 16
 = 4176

**3.** Diagrams may vary. 490

**4.** a) 54 × 63 = (50 + 4) × (60 + 3)
 = (50 × 60)+(50 × 3)+(4 × 60)+(4 × 3)
 = 3000 + 150 + 240 + 12
 = 3402

 b) 75 × 42 = (70 + 5) × (40 + 2)
 = (70 × 40)+(70 × 2)+(5 × 40)+(5 × 2)
 = 2800 + 140 + 200 + 10
 = 3150

**5.** **a)** $480 **b)** $1440

**6.** **a)** Tess **b)** 90 books

**7.** 1320

**8.** **a)** Estimate: 40 × 30 = 1200; product: 1176

 **b)** Estimate: 30 × 30 = 900; product: 952

Extra Practice 7 – Master 3.34

Lesson 7: Estimating Quotients to Solve Problems

Estimates may vary.

**1.** **a)** 500 ÷ 5 = 100 **b)** 700 ÷ 7 = 100

 **c)** 180 ÷ 2 = 90 **d)** 500 ÷ 5 = 100

**2.** **a)** About 100 **b)** About 50 **c)** About 60

 **d)** About 40 **e)** About 90 **f)** About 60

**3.** About 90 packs

**4.** About 100 pencil cases

**5.** About 50 pages

**6.** About 170 pages

**7.** About 70 tickets

**8.** **a)** About 30 bags

 **b)** I assumed each store put out about the same number of bags.

Extra Practice 8 – Master 3.35

Lesson 8: Dividing a 3-Digit Number by a 1-Digit Number

**1.** 106

**2.** **a)** 233 **b)** 317 R1 **c)** 405

 **d)** 450 **e)** 421 **f)** 203 R1

If the dividend is odd, there will be a remainder of 1.

**3.** **a)** 60 **b)** 90 **c)** 67 R1

**4.** **a)** 143 **b)** 93 R1 **c)** 163

 **d)** 82 **e)** 116 R3 **f)** 155 R2

**5.** **a)** 118 packages; there will be 2 crayons left over.

**6.** 41 students

**7.** 9

**8.** 459 is greater than 300, and 3 × 100 = 300, so the quotient will be greater than 100, so it will have 3 digits.

Extra Practice 9 – Master 3.36

Lesson 9: Other Strategies for Dividing Whole Numbers

**1.** **a)** 88 **b)** 84 **c)** 159 R3 **d)** 21 R6

**2.** 127 bicycles

**3.** **a)** 154 R1 **b)** 75 R1 **c)** 194 **d)** 103 R3

Extra Practice 10 – Master 3.37

Lesson 10: Solving Problems

**1.** $705

**2.** 70 kg

**3.** 111 cards

**4.** 426 photos