Homework (SG p. 543)

Questions 1–9

1. A. 4; 40; 400; 4000   **B.** 2; 20; 200; 2000
   C. 3; 30; 300; 3000   **D.** 8; 80; 800; 8000

2. A. 1; 1; 10; 100; 1000   **B.** 4; 4; 40; 400; 400
   C. 7; 7; 70; 700; 70   **D.** 6; 6; 60; 600; 60

3. Strategies will vary. Possible response: I know
   $28 \div 7 = 4$. I used that fact to answer the
   others. Each time I thought of a multiplication
   problem like $70 \times ? = 280$.
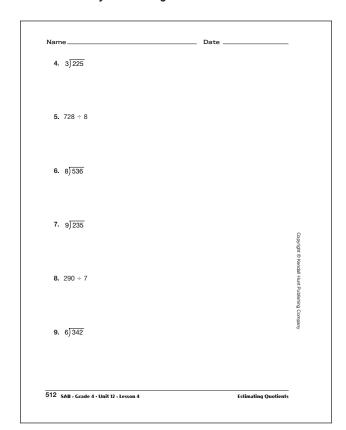   I know $4 \times 7 = 28$ so $4 \times 70 = 280$.

Possible responses and estimation strategies given for
Questions 4–9:

4. $288 \div 3$ is a little less than 100 because
   $300 \div 3 = 100$. $3 \times 100 = 300$ and
   $3 \times 90 = 270$. I used 3×10 and 3×9.

5. $346 \div 7$ is a little less than 50. $7 \times 50 = 350$
   and $7 \times 40 = 280$. I used 7×5 and 7×4.

6. $452 \div 9$ is about 50. $9 \times 50 = 450$ and
   $9 \times 60 = 540$. 452 is close to 450. I used 9×5
   and 9×6.

7. $590 \div 8$. Possible estimate: A little more than
   70 boxes but fewer than 80 boxes.
   $8 \times 70 = 560$, $8 \times 80 = 640$.

8. $950 \div 8$ is more than 100. $8 \times 100 = 800$ and
   $8 \times 200 = 1600$. 950 is closer to 800 than it is
   to 1600, so the answer is probably closer to 100
   than to 200.

9. A. $4142.65 - 500 = 3642.65$.
   $\$3600 \div 6 =$ about $\$600$ for each boy.

   B. An additional $\$150$ per boy needs to be
   raised, so the boys need to raise about $\$900$
   more.

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Name _____ Date _____

Using Multiplication Facts to Estimate

Estimate each quotient. Show which multiplication facts you used to make your estimates.

Example: $7\overline{)468}$

Think:

$7 \times$	50	$=$	350
$7 \times$	60	$=$	420
$7 \times$	70	$=$	490

← 468

Answer: The quotient will be at least 60 but less than 70. I used multiples of 10 and 7×5, 7×6, and 7×7. Since 468 is between $7 \times 60 = 420$ and $7 \times 70 = 490$.

1. Keenya listed the following quotients to help her solve $384 \div 5$.

$5 \times$	50	$= 250$
$5 \times$	60	$= 300$
$5 \times$	70	$= 350$
$5 \times$	80	$= 400$

Write an estimate using her list of multiplication facts.

2. $256 \div 4$

3. $416 \div 5$

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4. $3\overline{)225}$

5. $728 \div 8$

6. $8\overline{)536}$

7. $9\overline{)235}$

8. $290 \div 7$

9. $6\overline{)342}$

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*Answers and/or discussion are included in the lesson.

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Using Multiplication Facts to Estimate

Questions 1–9 (SAB pp. 511–512)

Estimates and strategies will vary. One possible strategy is given for each.

1. $384 \div 5$ is between 70 and 80 because $5 \times 70 = 350$ and $5 \times 80 = 400$.

2.* 4×6 and 4×7. Less than 70; $280 \div 4 = 70$, so $256 \div 4$ is less than 70, but more than 60.

3. 5×8 and 5×9. A little more than 80; $5 \times 80 = 400$ and $5 \times 90 = 450$, so $416 \div 5$ is between 80 and 90, but it is closer to 80 because 416 is closer to 400 than it is to 450.

4. 3×7 and 3×8. Between 70 and 80; $3 \times 70 = 210$ and $3 \times 80 = 240$, so $225 \div 3$ is between 70 and 80.

5. 8×9. 91; $720 \div 8 = 90$, so $728 \div 8$ is one more, 91.

6. 8×6 and 8×7. Between 60 and 70; $8 \times 60 = 480$ and $8 \times 70 = 560$, so $536 \div 8$ is between 60 and 70.

7. 9×2 and 9×3. Between 20 and 30; $9 \times 20 = 180$ and $9 \times 30 = 270$, so $235 \div 9$ is between 20 and 30.

8. 7×4 and 7×5. A little more than 40; $7 \times 40 = 280$ and $7 \times 50 = 350$, so $290 \div 7$ is between 70 and 80 but it will be closer to 70 because 290 is closer to 280 than it is to 350.

9. 6×5 and 6×6. Between 50 and 60; $6 \times 50 = 300$ and $6 \times 60 = 360$, so $342 \div 6$ is between 50 and 60.