

LETTER HOME

Patterns in Multiplication

Dear Family Member:

One of our main goals is that your child learns to calculate accurately and flexibly. Your child should not only know *how* to calculate, but also what calculations make sense and when to use them. Students need to realize that there are often many different ways to find the answer to a math problem and that sometimes only an estimate is needed while other situations call for an exact answer.

Estimation is an important part of this unit. Students use patterns to calculate with tens and hundreds to make mental calculations easier. Rounding numbers to the nearest tens, hundreds, or thousands place is one way of selecting a convenient number to use in estimating.

In Unit 4, students multiplied 2-digit numbers by single-digit numbers such as 37×4 . In this unit, they extend the methods they learned to larger numbers.

Use of different methods drives home the fact that there is no “one size fits all” in multiplication. A mental math strategy may be appropriate for 299×4 ; a paper-and-pencil method may make more sense for 552×6 . Some students may be more comfortable using the compact method, while others prefer the all-partials. Using the expanded form may help another student better understand multiplication and consequently make fewer mistakes, no matter which method he uses. Encourage your child to use the method that makes sense to him or her.

You can help your child at home:

Encourage Estimation. For example, in the grocery store, ask questions such as: “About how much will two loaves of bread cost?” or “Will \$10 be enough to pay for 3 gallons of milk?”


Divisibility Rules. Ask your child to describe the divisibility rules they developed for the 2s, 3s, 5s, and 9s.

Play Operation Target Game. In this game, four digits and all the operations are used to make numbers. For example, use the numbers 3, 4, 5, 6. What is the largest number you can make? What is the smallest? Directions are in the *Student Guide* in Lesson 1.

Play the Multiplication Digits Game. In this game, students draw numbers from a set of Digit Cards 0–9 and place the digits on a multiplication playing board. The person who makes the largest product is the winner. Directions are in the *Student Activity Book*.

Expanded Form	All-Partials	Compact
$\begin{array}{r} 552 = 500 + 50 + 2 \\ \times 6 \quad \quad \quad \times 6 \\ \hline 3000 + 300 + 12 = 3312 \end{array}$	$\begin{array}{r} 552 \\ \times 6 \\ \hline 12 \\ 300 \\ 3000 \\ \hline 3312 \end{array}$	$\begin{array}{r} ^3 ^1 \\ 552 \\ \times 6 \\ \hline 3312 \end{array}$

Solving a problem using different paper-and-pencil methods.



$$\begin{aligned} 299 \times 4 &= (300 \times 4) - 4 \\ &= 1200 - 4 \\ &= 1196 \end{aligned}$$

Solving a problem using a mental math strategy.

$\begin{array}{r} \square \square \\ \times \quad \square \\ \hline \end{array}$	$\begin{array}{r} \square \\ \times \square \square \\ \hline \end{array}$	$\begin{array}{r} \square \square \square \\ \times \quad \square \\ \hline \end{array}$
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Math Facts and Mental Math

This unit continues the systematic review and assessment of the division facts.

Division Facts. Students review the division facts for 2s and 3s to maintain and increase fluency and to learn to apply multiplication and division strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For the Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Start with the multiplication fact. If your child does not know the multiplication fact related to the division fact, start by developing strategies to solve that multiplication fact.

Turn-around facts. To solve $30 \div 3$, I know $3 \times 10 = 30$. So $30 \div 3 = 10$.

Skip counting. To solve $14 \div 2$, skip count 2, 4, 6, 8, 10, 12, 14. So $14 \div 2 = 7$ since it took 7 skips to get to 14.

Reasoning from known facts. To solve $12 \div 2$. I know $6 + 6 = 12$. So $12 \div 2 = 6$.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s:
 $600 \div 20 = 30$, $120 \div 3 = 40$, $2100 \div 300 = 7$.

Please contact me if you have any questions or concerns.

Sincerely,

Unit 7: Home Practice

Part 1 Triangle Flash Cards: 2s and 3s

Study for the quiz on the division facts for the last six facts. Take home your Triangle Flash Cards: 2s and 3s and your list of facts you need to study.

Here's how to use the flash cards: Ask a family member to choose one flash card at a time. Your partner should cover the corner containing one of the smaller numbers. This number will be the answer to a division fact. Solve a division problem with the two uncovered numbers.

Your teacher will tell you when the division quiz on the 2s and 3s will be.

Part 2 Order of Operations

1. Remember the order of operations as you do the following problems. You may use a calculator, but be sure you follow the order of operations even if your calculator does not.

A. $7 \times 2 + 5 =$ _____

B. $(8 + 4) \times 3 =$ _____

C. $7 + 24 \div 3 =$ _____

D. $7 \times 4 + 5 \times 2 =$ _____

E. $8 \times (6 - 3) \times 3 =$ _____

F. $36 \div 9 + 6 \times 7 =$ _____

G. $7 + 9 \times 8 - 5 =$ _____

H. $100 - 49 \div 7 + 10 =$ _____

2. Play Operation Target. Use the numbers 1, 2, 3, and 4 and the four operations to make as many different whole numbers as you can. You need paper, a pencil, and a calculator. In each number sentence, you must use each of the four digits exactly once. You can use operations once, more than once, or not at all. For example, to make 10 you can write: $4 \times 1 + 2 \times 3 = 10$. Use a separate sheet of paper to write the number sentences for each of the numbers you make.

Part 3 Divisibility

Answer the questions about the numbers listed below.

567 85,680 289 27,786 1028 10,782

1. Which numbers are divisible by 2? How did you decide?

2. Which numbers are divisible by 3? How did you decide?

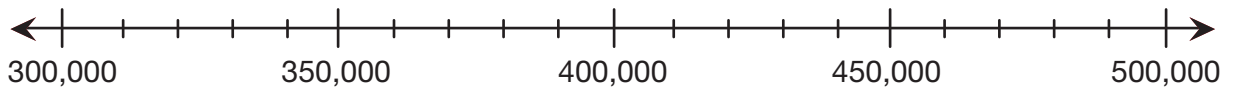
3. Which are divisible by 6? How did you decide?

4. Which are divisible by 5 and 10? How did you decide?

5. Which are divisible by 9? How did you decide?

Part 4 Rounding

Place the numbers on the number line using their letters. Then use the number line to round the numbers as directed.



	Nearest thousand	Nearest ten thousand	Nearest hundred thousand
A. 337,894	_____	_____	_____
B. 414,112	_____	_____	_____
C. 488,792	_____	_____	_____
D. 375,493	_____	_____	_____

Part 5 Groups and More Groups

Use the *Multiplication Strategies Menu* in the *Student Guide Reference* section.

1. Bessie Coleman School is holding a fund-raiser. The money earned will go towards buying new books for the school library. Jacob is in charge of pouring lemonade at the fund-raiser. He has 19 packages of paper cups. Each package has 20 cups. About how many cups does he have?
2. Lee Yah is in charge of selling hot dogs. She has 36 packages of hot dog buns at the start of the day. Each package has 8 buns. How many hot dogs can she sell?
3. Jacob is selling raffle tickets. One raffle ticket sells for \$4.
 - A. So far he has collected \$160. How many raffle tickets did he sell?
 - B. His goal is to collect \$400. How many more raffle tickets must he sell to reach his goal?
4. Ten people can sit at one table for Bingo. There are 12 tables for Bingo. How many people can play Bingo at one time?
5. At the fund-raiser, a “meal deal” that includes a hot dog, drink, and chips costs \$3. There are 96 students in the eighth grade at Bessie Coleman School. If each eighth grader buys one meal deal, how much money will the eighth-grade class pay in all for their food?
6. Students playing Knock Down the Bottles get 2 balls for a quarter. How many players must pay for the booth to earn \$10? How many balls will have been tossed?

Part 6 Multiplying by Tens

1. Solve the following problems.

A. $6 \times 70 = \underline{\hspace{2cm}}$ B. $8 \times 400 = \underline{\hspace{2cm}}$ C. $800 \times 6 = \underline{\hspace{2cm}}$

D. $7000 \times 4 = \underline{\hspace{2cm}}$ E. $800 \times 80 = \underline{\hspace{2cm}}$ F. $60 \times 40 = \underline{\hspace{2cm}}$

2. Find what n must be to make each number sentence true.

A. $60 \times n = 360$ B. $n \times 5 = 350$ C. $n \times 900 = 5400$

Part 7 More Multiplication1. Solve the following problems using paper and pencil or mental math. Use the *Multiplication Strategies Menu* in the *Student Guide Reference* section.

A.
$$\begin{array}{r} 14 \\ \times 7 \\ \hline \end{array}$$

B.
$$\begin{array}{r} 700 \\ \times 40 \\ \hline \end{array}$$

C.
$$\begin{array}{r} 42 \\ \times 3 \\ \hline \end{array}$$

D.
$$\begin{array}{r} 35 \\ \times 8 \\ \hline \end{array}$$

E.
$$\begin{array}{r} 48 \\ \times 6 \\ \hline \end{array}$$

F.
$$\begin{array}{r} 600 \\ \times 300 \\ \hline \end{array}$$

2. Use convenient numbers to estimate the following products.

A. $50 \times 61 =$

B. $89 \times 40 =$

C. $397 \times 30 =$

D. $78 \times 32 =$

E. $186 \times 63 =$

F. $621 \times 88 =$

Part 8 Using Estimation

Use the information in the table to estimate the answers to the questions below. Record your work on a separate sheet of paper.

Ballpark Attendance at Games in 2011

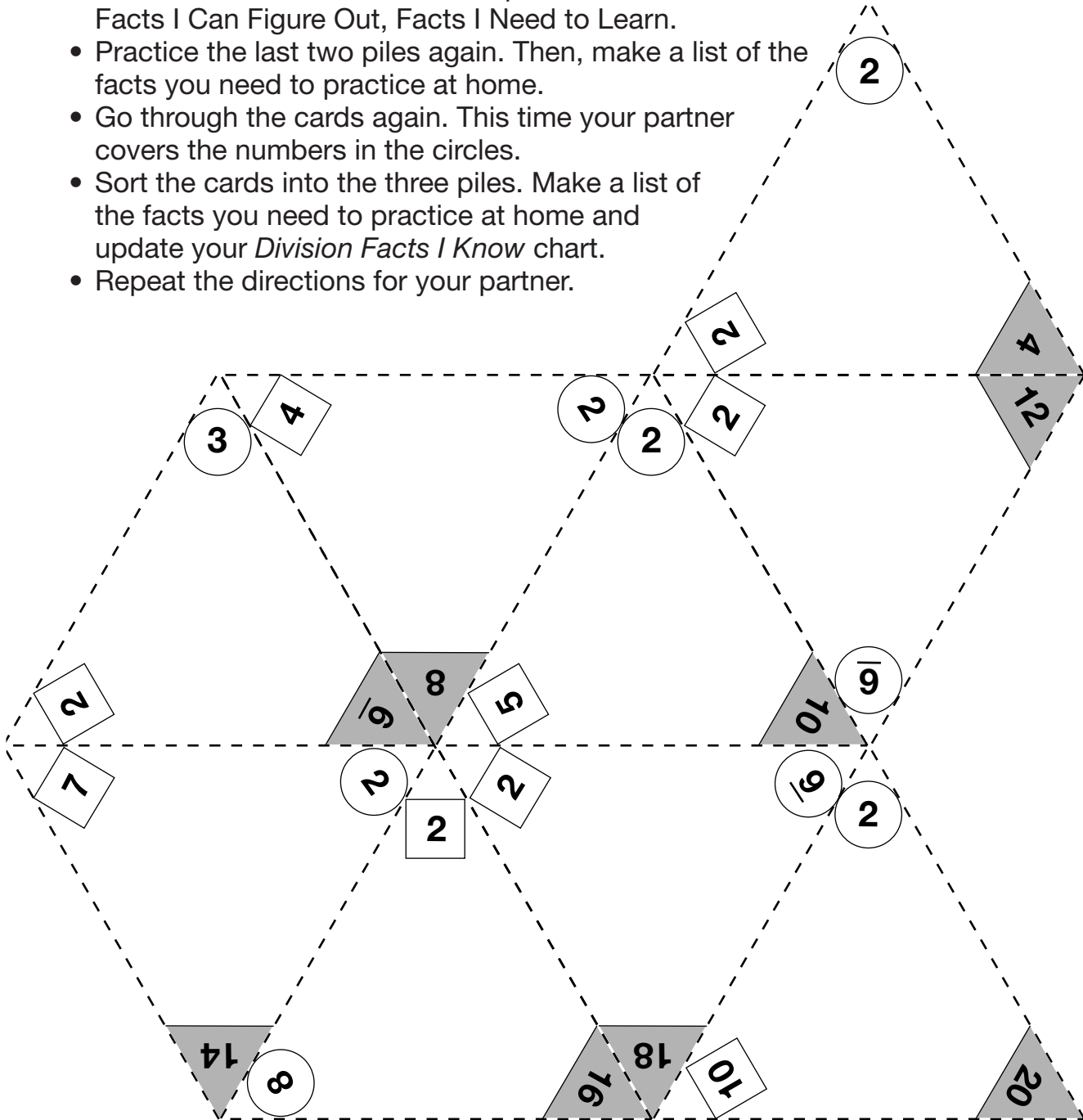
Baseball Team	Number of Attendance	Baseball Team	Number of Attendance
Arizona Diamondbacks	2,128,765	Minnesota Twins	2,416,237
Atlanta Braves	2,373,631	New York Yankees	3,719,358
Baltimore Orioles	1,907,163	Philadelphia Phillies	3,600,693
Chicago Cubs	3,168,859	Pittsburgh Pirates	1,577,853
Chicago White Sox	2,284,163	Seattle Mariners	2,195,533

- List the five teams with the greatest attendance. Order the teams and their attendance from largest to smallest.
- About how many more people attended New York Yankees games than Pittsburgh Pirates games?
- About how many more people attended Philadelphia Phillies games than Chicago Cubs games?
- Which team has about double the attendance of the Pittsburgh Pirates?
- About how many more people attended Minnesota Twins games than Arizona Diamondbacks games?
- About how many fans enjoyed baseball in these ten ballparks?
- Estimate these products. Then find an exact answer using paper and pencil or mental math. Use the *Multiplication Strategies Menu* in the *Student Guide Reference* section.

A. $\begin{array}{r} 53 \\ \times 4 \end{array}$	B. $\begin{array}{r} 38 \\ \times 2 \end{array}$	C. $\begin{array}{r} 77 \\ \times 3 \end{array}$	D. $\begin{array}{r} 65 \\ \times 5 \end{array}$
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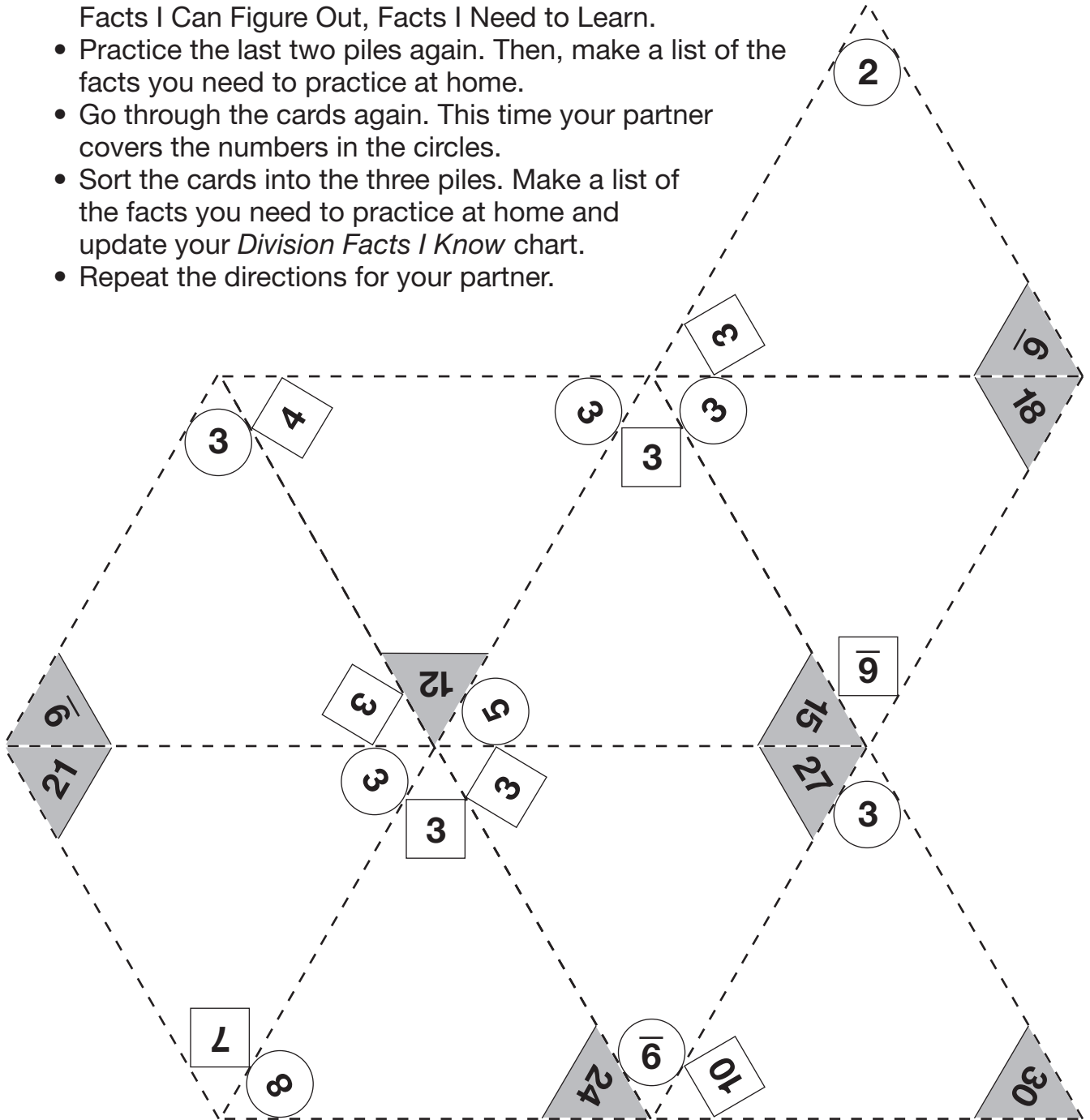
Triangle Flash Cards: 2s

- Work with a partner. Each partner cuts out the flash cards.
- To quiz you on a division fact, your partner covers the number in the square. Solve a division fact with the two uncovered numbers.
- Divide the used cards into three piles: Facts I Know, Facts I Can Figure Out, Facts I Need to Learn.
- Practice the last two piles again. Then, make a list of the facts you need to practice at home.
- Go through the cards again. This time your partner covers the numbers in the circles.
- Sort the cards into the three piles. Make a list of the facts you need to practice at home and update your *Division Facts I Know* chart.
- Repeat the directions for your partner.



Triangle Flash Cards: 3s

- Work with a partner. Each partner cuts out the flash cards.
- To quiz you on a division fact, your partner covers the number in the square. Solve a division fact with the two uncovered numbers.
- Divide the used cards into three piles: Facts I Know, Facts I Can Figure Out, Facts I Need to Learn.
- Practice the last two piles again. Then, make a list of the facts you need to practice at home.
- Go through the cards again. This time your partner covers the numbers in the circles.
- Sort the cards into the three piles. Make a list of the facts you need to practice at home and update your *Division Facts I Know* chart.
- Repeat the directions for your partner.



Division Facts I Know

- Circle the facts you know well.
- Keep this table and use it to help you divide.
- As you learn more facts, you may circle them too.

DIVISION

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Order of Operations Quiz

Solve the following problems using the correct order of operations:

A. $5 + 4 \times 3 =$

B. $6 + 8 \div 2 =$

C. $5 \times 2 - 6 \div 2 =$

D. $(5 + 4) \times 3 =$

E. $3 \times 3 - 3 \div 3 =$

F. $3 + 3 \times 3 - 3 =$

G. $2 \times (5 + 5) \times 3 =$

H. $8 \times 3 - 8 \times 3 =$

I. $2 + 2 \times 2 =$

J. $18 \div 3 \times 6 =$

K. $5 - 3 + 1 =$

L. $8 - 4 \div 2 + 3 =$

Name _____

Date _____

100 Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Small Multiplication Tables

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

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Operations, Divisibility, and Estimation Quiz

1. Solve the following problems using the correct order of operations.

A. $6 + 5 \times 6$

B. $7 - 4 + 2$

C. $9 \times (6 - 5) \times 4$

D. $16 \div 2 \times 8 + 5$

2. Look at the following list of numbers:

1243 482 981 815 1080 36

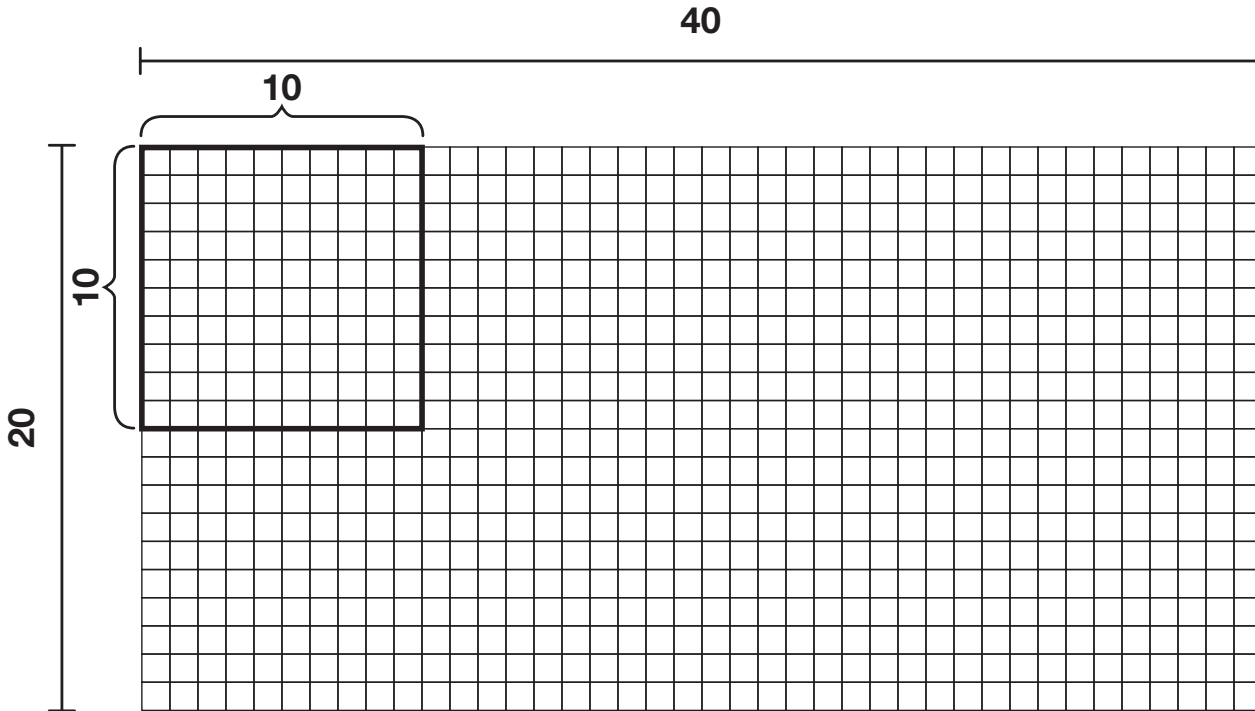
A. Which numbers in the list are divisible by 2?

B. Which numbers in the list are divisible by 9?

3. A. Is 480 divisible by 5? _____ Give a reason for your answer.

B. Is 480 divisible by 6? _____ Give a reason for your answer.

4. Jacob wants to show how to multiply 20×40 by using the rectangle grid below. He started by showing the length and width of the rectangle grid and then he marked off one 10-by-10 square. Help Jacob finish solving the problem. Use the rest of the rectangle to show how you found the answer.



5. Solve the following multiplication problems using any method you choose.

A. $40 \times 80 =$

B. $50 \times 600 =$

6. Show or tell how you solved Question 5B. Explain why your method works.

7. Find the value of n that makes each number sentence true.

A. $n \times 8 = 5600$

B. $100 \times n = 10,000$

8. Mrs. Dewey is buying science books for the 18 students in her class.

A. If the books are \$35.99 each, estimate about how much money she should bring to the bookstore. Show how you estimated.

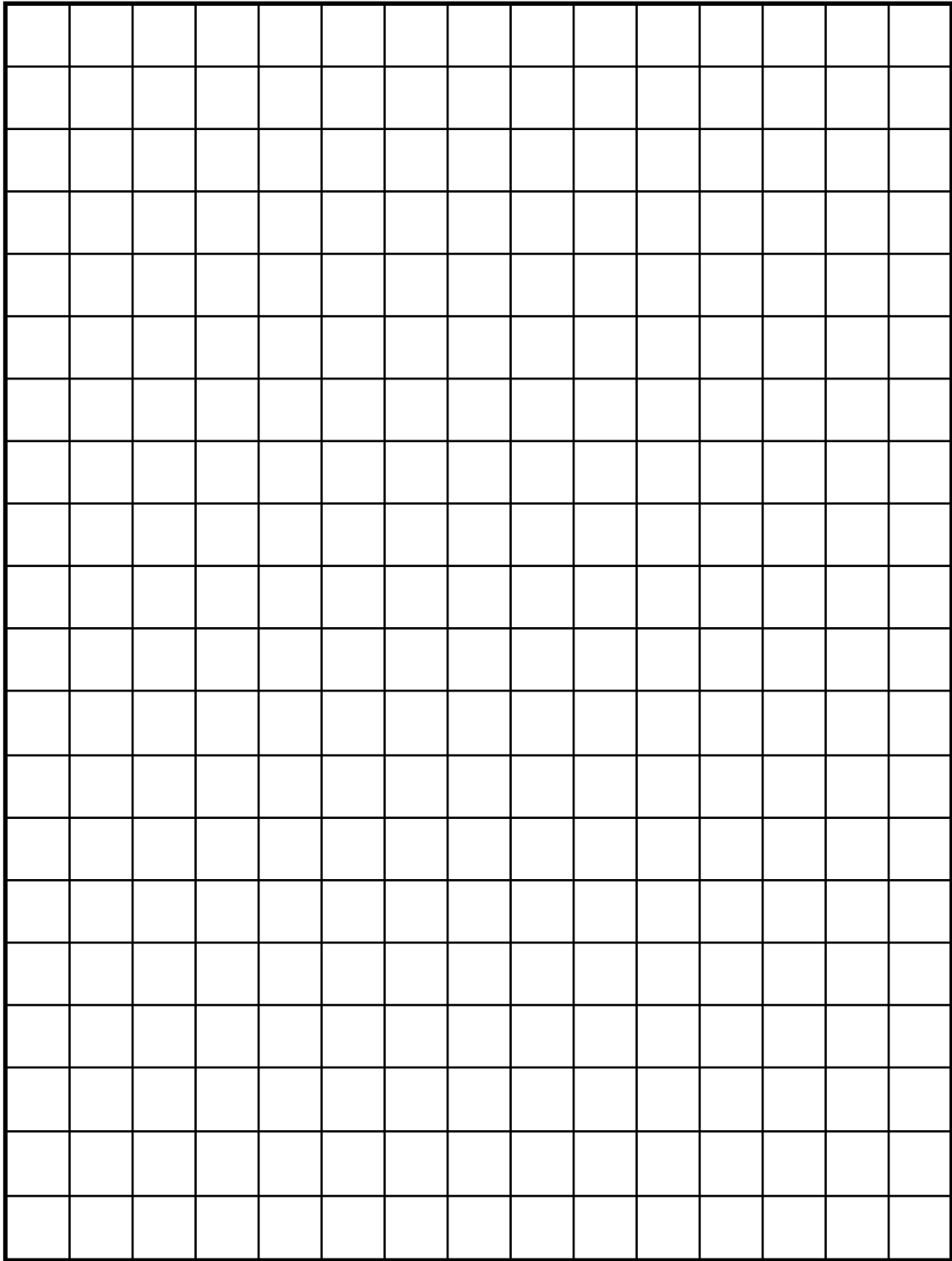
B. Should your estimate be higher or lower than the exact answer? Explain your reasoning.

**Operations, Divisibility,
and Estimation Quiz
Feedback Box**

	Expectation	Check In	Comments
Use divisibility rules to identify factors and multiples. [Q# 2–3]	E1		
Multiply numbers that are multiples of ten. [Q# 4–7]	E2		
Follow the order of operations. [Q# 1]	E5		
Estimate products. [Q# 8]	E6		

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Name _____ Date _____



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Hour Walk Work

If you walked steadily for an hour, about how many steps would you take? Fill in the circle by your answer.

500
 1000
 5000
 10,000
 50,000
 100,000

Make an estimate without walking for one hour. Explain how you made your estimate. Show all your work.

Hour Walk Work Feedback Box	Expect- ation	Check In	Comments
Estimate products.	E6		
Choose appropriately when to find an estimate and when to find an exact answer.	E8		

Math Practices Notes

Solving a problem:

<p>1. Know the problem. I read the problem carefully. I know the questions to answer and what information is important.</p>	<p>2. Find a strategy. I choose good tools and an efficient strategy for solving the problem.</p>
<p>3. Check for reasonableness. I look back at my solution to see if my answer makes sense. If it does not, I try again.</p>	<p>4. Check my calculations. If I make mistakes, I correct them.</p>

Showing or telling how I solve a problem:

<p>5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.</p>	<p>6. Use labels. I use labels to show what numbers mean.</p>
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Name _____

Date _____

Keenya's Work

5,000 is closest to our answer

1,059 steps 105 steps
10:00 min. 1:00 min.

My partner and I walked for 10 min. We both got exactly 1,059 steps since we both have the same answer we don't have to average out our work 10×6 is 60 and this are 60 min. In an hour we multiply $1,059 \times 6 = 6,354$ step that's our answer

if we walked 1 hour
We also walked for 1 min. Again we got the same answer. It was 105 steps. $1 \times 60 = 60$ so we multiplied 105×60 We got 6,350 steps that's our other answer for how many steps it would take for 1 hour. We know we are close because the our answers are only 4 steps away. We can't find a better answer if we average out our

Time	How many steps	answer
10 min	1,059	6,354
1 min	105	6,350

First we added

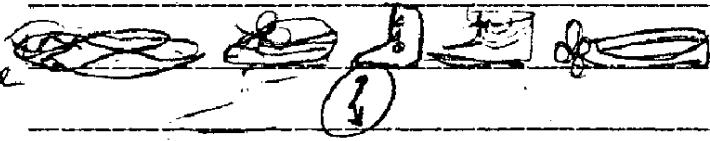
$$\begin{array}{r} 6354 \\ + 6350 \\ \hline 12704 \end{array}$$
 then we divided

$$\begin{array}{r} 12704 \\ \div 2 \\ \hline 6352 \end{array}$$
 This is the best answer we can come up with.

Michael's Work

we decided we picked 5,000 steps because all three of us in our group walk about 100 steps per minute. $100 \times 60 = 6,000$ and 5,000 is the closest to 6,000 steps.

because we took 100 steps and there are 60 minutes in an hour.



we used the calculator for a minute

Name	Number of steps in a minute
Michael	112
Roberto	97
Jessie	108

Grace's Work

We walked for one minute and we
got five answers at different paces.
Then we added them all up and divided
them by five and we got the average.
It was 104. ^(the average) Then we did 50×104 , which
equals 5,200, which is closest to 5,000.
That is why we think it is
5,000

Two-Digit Multiplication Quiz

1. Solve these problems. Choose a mental math strategy to solve one of the problems. Choose a paper-and-pencil method for the other. Show your solution path for each problem.

A. 63×7

B. 6×49

- C. Show how to find an estimate for Question 1B. Compare your estimate and solution. Is your solution reasonable?

2. Choose an efficient strategy to solve 97×3 . Explain why you think your strategy is efficient for this problem.

3. Ike started to solve this problem but could not finish. Finish Ike's problem for him using his strategy.

$$67 = 60 + 7$$

$$\begin{array}{r} \times 3 \\ \hline \end{array}$$

Two-Digit Multiplication Quiz Feedback Box

	Expectation	Check In	Comments
Show understanding of how to use place value concepts and properties to multiply. [Q# 3]	E3		
Estimate products. [Q# 1C]	E6		
Multiply 2-digit numbers by 1-digit numbers. [Q# 1A–B, 2–3]	E7		
Choose an efficient strategy to solve multiplication problems. [Q# 1–3]	E8		

Three Paper-and-Pencil Methods

Using All-Partials



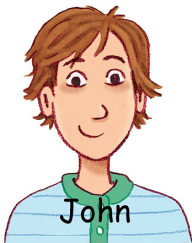
$$\begin{array}{r} 324 \\ \times 4 \\ \hline 1200 \\ 80 \\ 16 \\ \hline 1296 \end{array}$$

Using Rectangles



	300	20	4	
4	$4 \times 300 = 1200$	$4 \times 20 = 80$	$4 \times 4 = 16$	$\begin{array}{r} 1200 \\ 80 \\ + 16 \\ \hline 1296 \end{array}$

Using Expanded Form



$$\begin{array}{r} 324 = 300 + 20 + 4 \\ \times 4 \qquad \qquad \times 4 \\ \hline 1200 + 80 + 16 = 1296 \end{array}$$

Making Connections in Multiplication

Use the *Multiplication Strategies Menu for Larger Numbers* to help you solve the following problems.

1. Michael did a research project about traffic. He counted 278 cars passing through a busy intersection during one hour. He estimated that less than 1500 cars would pass through during that same hour from Monday through Friday. Explain how Michael reached his estimate. What “friendly” numbers did he use and how did he get them?
2. Jerome solved the problem below using the compact method.

$$\begin{array}{r} 24 \\ 348 \\ \times 6 \\ \hline 2088 \end{array}$$

A. Why did Jerome place a 4 above the tens column? What does this 4 mean?

B. How did Jerome get the 8 in the tens column of the answer?

C. Jerome placed a 2 above which column? _____

Why?

What does this 2 mean?

D. How did Jerome get the 2 in the thousands column of the answer?

3. Lee Yah solved 259×3 using expanded form as shown below. Use Lee Yah's work to show how to solve the same problem using rectangles.

$$\begin{array}{r}
 259 = 200 + 50 + 9 \\
 \times 3 \qquad \qquad \times 3 \\
 \hline
 600 + 150 + 27 = 777
 \end{array}$$

4. Show how to solve the problem below using a mental math strategy and a paper-and-pencil method.

$$\begin{array}{r}
 151 \\
 \times 4 \\
 \hline
 \end{array}$$

**Making Connections in Multiplication
Feedback Box**

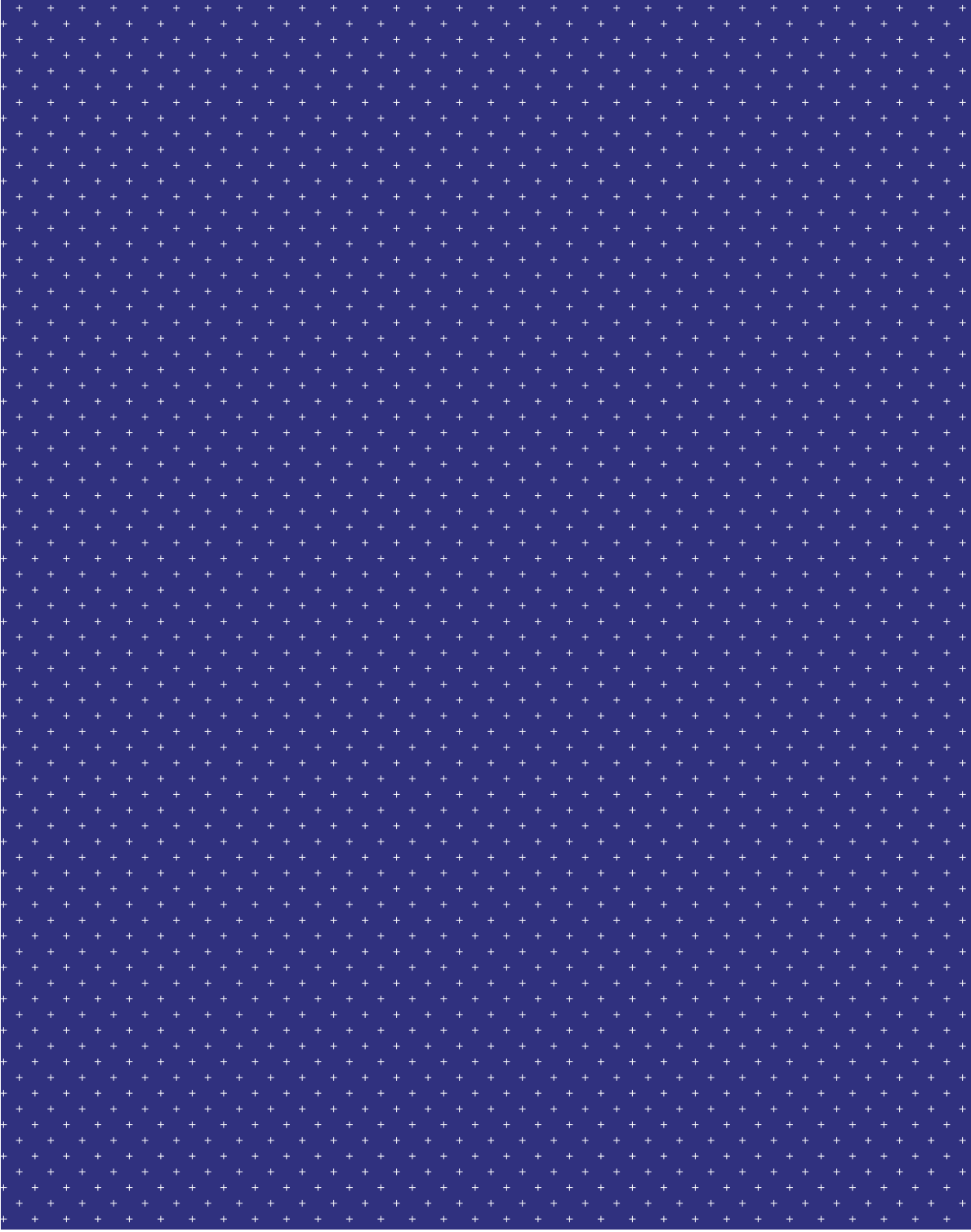
	Expectation	Check In	Comments
Use place value and mathematical properties to multiply. [Q# 1–4]	E3		
Show connections between models and strategies for multiplication. [Q# 3–4]	E4		
Estimate products. [Q# 1–4]	E6		
Multiply larger numbers using mental math strategies and paper-and-pencil methods (e.g., expanded form, all-partials, compact). [Q# 1–4]	E7		

When Do We Estimate?

	Situation	Example #1	Example #2
1.	When we want to check if an answer is reasonable	After we use a calculator or paper and pencil to find an exact answer	
2.	When we want to find a quick answer in our heads	When we are estimating the cost of 20 cans of pet food at the store	
3.	When we don't need an exact answer	Finding the amount a school spends on electricity in one year to plan for the next year	
4.	When it is difficult or impossible to find an exact answer	The number of leaves in a forest	
5.	When numbers don't stay exactly the same over time	The value of five rare stamps (the price might change from one day to the next)	

Digit Cards 0-9

4	9
3	8
2	7
1	6
0	5



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**Workshop: Multiplication
with Larger Numbers
Check-In: Questions 23–28
Feedback Box**

	Expectation	Check In	Comments
Multiply multidigit numbers by 1-digit numbers using mental math strategies and paper-and-pencil methods (e.g., expanded form, all-partials, compact). [Q# 23–24]	E7		
Estimate products. [Q# 26]	E6		
Choose appropriate strategies. [Q# 23–24, 26–28]	E8		
Strategies observed:			

**Workshop: Multiplication
with Larger Numbers
Check-In: Questions 23–28
Feedback Box**

	Expectation	Check In	Comments
Multiply multidigit numbers by 1-digit numbers using mental math strategies and paper-and-pencil methods (e.g., expanded form, all-partials, compact). [Q# 23–24]	E7		
Estimate products. [Q# 26]	E6		
Choose appropriate strategies. [Q# 23–24, 26–28]	E8		
Strategies observed:			

Place Value Chart

Millions Period			Thousands Period			Ones Period		

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