EoT_T1_Coverage_Grade 3

هيكل مادة الرياضيات للصف الثالث

2025-2026

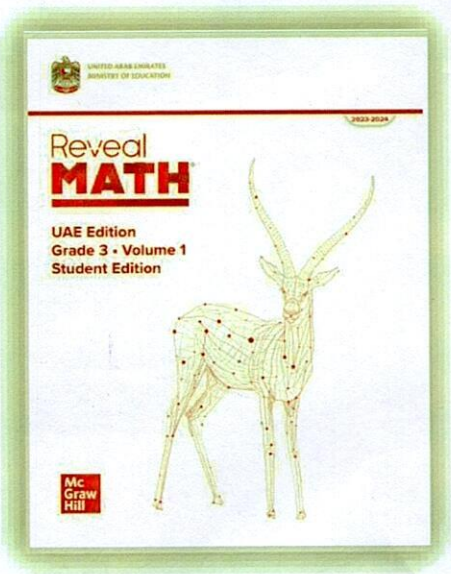
الفصل الدراسي الأول

Math Teacher:

Farida Alhammadi



Good Luck!



School Principal :

Bakheeta Almansoori

Academic Year العام الدراسي	2025/2026
Term الفصل	1
Subject المادة	Mathematics/Revesl الرياضيات/ريفيل
Grade الصف	3
Stream المسار	General العام
Number of MCQ عدد الأسئلة الموضوعية	20
Marks of MCQ درجة الأسئلة الموضوعية	(2-4)
Number of FRQ عدد الأسئلة المقالية	5
Marks per FRQ درجات الأسئلة المقالية	(5-10)
Type of All Questions نوع الأسئلة	MCQ/ الأسئلة الموضوعية FRQ/ الأسئلة المقالية
Maximum Overall Grade الدرجة القصوى الممكنة	100
Exam Duration - المدة الزمنية	120 minutes
Mode of Implementation -طريقة الاجراء	Paper-Based
Calculator الحاسبة الآلية	Not Allowed غير مسموحة

School principal
Bakheeta Almansoori

Farida Alhammadi

Math Teacher
Farida Alhammadi

Question* / السؤال*		Learning Outcome/Performance Criteria** / نتاج التعلم/ معايير الأداء**	Reference(s) in the Student Book (English Version) / المرجع في كتاب الطالب (النسخة الإنجليزية)	
			Example/Exercise / مثال/تمرين	Page / الصفحة
MCQ (الأسئلة الموضوعية)	1	Round numbers to the nearest 10 or nearest 100.	(1-8)	39
	2	Apply the properties of addition when adding two or more addends.	(1-6)	49
	3	Identify addition patterns and use the patterns to help determine sums of 3-digit numbers and check their accuracy.	Learn+Work Together	52
			(1-6)	53
	4	Adjust numbers to help add or subtract.	Learn+Work Together & (1-8)	64 & 65
			15	85
	5	Use related addition equations to find the difference.	(1-5)	69
	6	Explain different strategies to subtract 3-digit numbers.	(1-7)	77
	7	Use letters for unknowns.	Learn+Work Together	80
			(1-4)	81
	8	Explain the meaning of multiplication as equal groups.	Learn+Work Together	92
			(1-8)	93
	9	Use arrays to represent multiplication.	(1-6)	97
	10	Represent division with equal sharing.	(1-8)	107
	11	Represent division with equal grouping.	(1-8)	111
	12	Use equal groups and arrays to represent the relationship between multiplication and division.	(1-6)	115
			(8,9)	116
	13	Describe and use patterns to multiply by 2.	(1-10)	131
			(11-14)	132
	14	Describe and use patterns to multiply by 5.	(1-11)	135
			(12-15)	136
	15	Describe and use patterns to multiply with 0 and 1.	(1-11)	145
			(12-14)	146
	16	Use known patterns to solve unknown facts.	Learn+Work Together	148
			(1-12)	149
	17	Demonstrate an understanding of the Distributive Property.	(1-6)	165
			(7-10)	166
	18	Apply the properties of multiplication to recall 3s facts.	(12-15)	170
			(13,17)	195
	19	Apply the properties of multiplication to recall 6s facts.	(1-7)	177
			(12,16)	195
	20	Apply the properties of multiplication to recall 7s and 9s facts.	(1-11) & (12-14)	185 & 186
			(7,8)	194

الأسئلة الموضوعية
(الاختيار من متعدد) MCQ
20 سؤال
الدرجة : (2-4) درجات

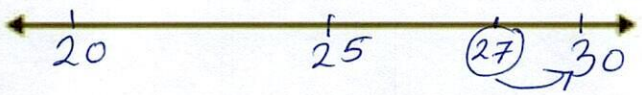
not give × 1, 2, 3, 4 poor number
give ① ✓ 5, 6, 7, 8, 9 rich number

Page :39

Use a number line to round.

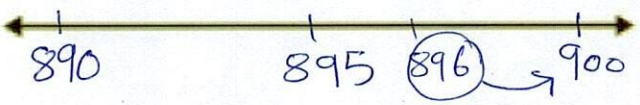
1. Round 27 to the nearest 10.

30



2. Round 896 to the nearest 10.

900



Use place value to round.

3. Round 48 to the nearest 10.

50

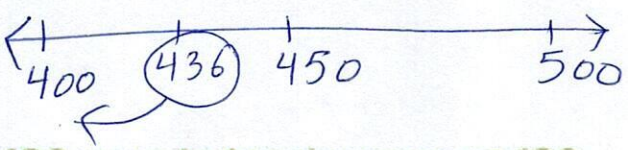
4. Round 273 to the nearest 10.

270

Use a number line to round. Show your work.

5. Round 436 to the nearest 100.

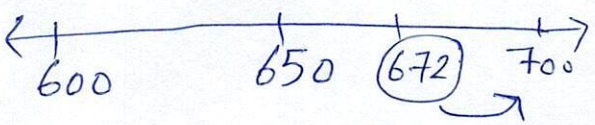
400



436 rounded to the nearest 100 is 400.

6. Round 672 to the nearest 100.

700



672 rounded to the nearest 100 is 700.

7. How can the number 78 round to 80 and 100? Explain.

78 → 80 Round to 10
078 → 100 Round to 100

8. A number rounded to the nearest 10 is 240. What number could it be? 241, 242, 243, 244

OR 235, 236, 237, 238, 239

Page :49

How can you make the equation true?

1. $218 + 325 = 325 + \underline{218}$

2. $465 + \underline{78} = 78 + 465$

3. $529 + 407 = \underline{407} + 529$

4. $\underline{505} + 93 = 93 + 505$

5. Mauricio had a sale. The table shows the number of items he sold each day. Which expressions show how to find the total number of items Mauricio sold? Choose all that apply.

A. $42 + 67 + 58$

B. $67 = 58 + 42$

C. $58 + 42 + 67$

D. $58 + 67 + 24$

Items Sold	
Monday	58
Tuesday	67
Wednesday	42

6. How can you group the addends to make it easier find the sum? Explain your thinking.

$$\begin{array}{r} {\scriptstyle 1} \\ 372 \\ +\ 264 \\ \hline 636 \end{array}$$

$372 + 264 + 228$

$636 + 228$

$$\begin{array}{r} {\scriptstyle 1} \\ 636 \\ +\ 228 \\ \hline 864 \end{array}$$

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Learn

Mena notices that when she adds an even number and an odd number, the sum is odd.

How can she determine if the sum of an even number and an odd number is always odd?

72 + 13 = 85
18 + 41 = 59
30 + 25 = 55

When you add **even numbers** and **odd numbers**, there are patterns in the sums.

When you add two even numbers, the sum is even.

246 + 100 = 346

432 + 224 = 656

318 + 480 = 798

When you add two odd numbers, the sum is even.

547 + 155 = 702

325 + 631 = 956

421 + 273 = 694

When you add an even number and an odd number, the sum is odd.

272 + 723 = 995

546 + 231 = 777

647 + 244 = 891

Math is... Generalizations

Why is it true that the sum of two odd numbers is always even?

You can use addition patterns to help you determine a sum, or to check your work, when you add 3-digit numbers.

Work Together

Nisha writes 135 + 232 = 167. She says her sum is correct because an odd number added to an even number equals an odd sum. Do you agree with her reasoning? Explain.

No, not correct because the sum is less than one of the addends

$$\begin{array}{r} 135 \\ +\ 232 \\ \hline 367 \end{array}$$

even = زوجي

odd = فردي

even + even = even
odd + odd = even
even + odd = odd

Page :53

What makes the equation true? Write *even* or *odd*. Then write two equations with 3-digit numbers to support your answer.

example.

1. even = even + even

example:-

102 + 304 = 406

even + even = even

2. odd + even = odd

225 + 202 = 427

odd + even = odd

3. odd + odd = even

671 + 101 = 772

odd + odd = even

4. even + odd = odd

104 + 105 = 209

even + odd = odd

5. even + even = even

312 + 442 = 754

even + even = even

6. even = odd + odd

811 + 101 = 912

odd + odd = even

Learn

There are 224 Tigers fans and 212 Hawks fans at the town football game. 109 more Tigers fans arrive late to the game.



How many more Tigers fans than Hawks fans are at the game?

Adjust Addition Equations

$224 + 109 = ?$

$-1 \quad +1$

$223 + 110 = 333$

Subtract from one addend and add that amount to the other.

Adjust Subtraction Equations

$333 - 212 = ?$

$-2 \quad -2$

$331 - 210 = 121$

Subtract or add the same amount to both numbers.

You can adjust numbers to get numbers that are easier to work with. Adjust both numbers to keep the sum or difference the same as the original.

Math is... Structure

How is adjusting a subtraction equation different from adjusting an addition equation?

Work Together

Marco adds 457 + 208. He adjusts 457 to 460 and 208 to 211. He finds the sum 671. Do you agree with his strategy? Explain.

No,
He must to subtract 3 from other addend

X

$457 + 208$

$+3 \quad +3$

$460 + 211$

✓

$457 + 208$

$+3 \quad -3$

$460 + 205 = 665$

Page :65

Add (+) → (+) or (−) — different

subtract (−) → (+) or (+) — or (−) → (−) or (−) — same

How can you adjust the equation to solve?

1. 272 − 99 = _____

[+1] [+1]

273 − 100 = 173

2. 139 + 216 = _____

[+1] [−1]

140 + 215 = 355

3. 847 − 332 = _____

[−2] [−2]

845 − 330 = 515

4. 398 + 147 = _____

[+2] [−2]

400 + 145 = 545

5. 491 − 226 = _____

[+4] [+4]

495 − 230 = 265

6. 129 + 139 = _____

[+1] [−1]

130 + 138 = 268

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7. Alex adjusted the equation 109 + 119 = ? to 110 + 118 = ?. Describe how he adjusted the equation. Why do you think he did it in that way?

+1 −1

109 + 119

+1 −1

110 + 118 = 228

because it make equation easier.

8. Show how you can adjust 396 − 226. Use a number line to show that the new equation has the same difference.

396 − 226

−6 −6

390 − 220 = 170

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15. Gabe is trying to solve 246 + 367. Which equation shows how he could adjust the addends to find the sum?

+4 −4

(Lesson 2-8)

246 + 367

+4 −4

250 + 363

A. 250 + 360 = ?

B. 250 + 370 = ?

C. 250 + 363 = ?

D. 250 + 371 = ?

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How can you write a related addition equation for the subtraction equation?

1. $635 - 202 = ?$ $202 + ? = 635$

2. $400 - 151 = ?$ $151 + ? = 400$

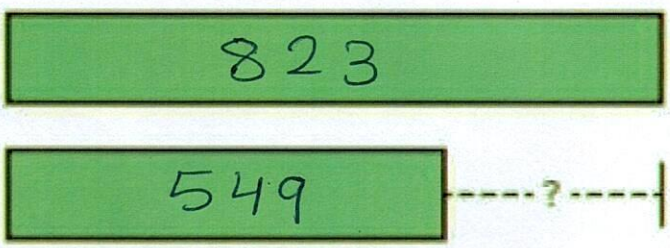
3. $825 - 134 = ?$ $134 + ? = 825$

4. **Error Analysis** Jayla knows she can use addition to subtract. She adds $301 + 447$ to find the difference of $447 - 301$. How can you help her understand how to use this strategy?

$301 + ? = 447$

5. On Monday, 549 people visited the aquarium. On Friday, 823 people visited the aquarium. How many more people visited the aquarium on Friday?

   a. How can you fill in the bar diagram to represent the problem?



$823 - 549 = ?$

   b. How can you write an equation with an unknown to represent the bar diagram? $549 + ? = 823$

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How can you solve each equation?

1. 779 − 363 = _____

-3 -3

776 − 360 = 416

2. 562 − 295 = _____ (decompose)

562 − 200 = 362

362 − 90 = 272

272 − 5 = 267

3. 934 − 874 = _____

934 − 800 = 134

134 − 70 = 64

64 − 4 = 60

4. 134 − 68 = _____

+2 +2

136 − 70 = 66

136 − 70 = 66

5. At the airport baggage claim, there are 497 passengers and 632 pieces of luggage. How many more pieces of luggage are there than passengers?

632 − 497

+3 +3

635 − 500 = 135

6. Mark and Heidi are asked to solve 171 − 136. Their work is shown. Which strategy would you choose to solve the problem?

Heidi because it easier

Mark	Heidi
170 − 135 = ?	136 + ? = 171

Adjust

171 − 136

-1 -1

170 − 135 = 35

Related Addition

136 + 4 = 140

140 + 30 = 170

170 + 1 = 171

30 + 4 + 1 = 35

7. Cadence earned 299 points in her online game. This was 102 points greater than her last score. Marco earned 414 points. How many more points did Marco earn?

414 − 299 = ?

+1 +1

415 − 300 = 115

414 − 299 = 115

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Learn

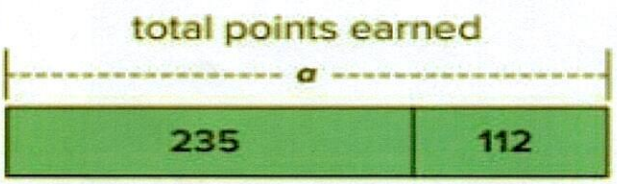
Lea earns 235 points playing her favorite dance video game. She plays the next level and earns 112 more points. Lea needs 475 points to buy a new song for the game.

How many more points does Lea need to buy a new song?

Math is... Modeling

How can you represent this problem in different ways?

Step 1 Determine how many points Lea has earned.



(+) بسمة

دائماً مستطيل واحد

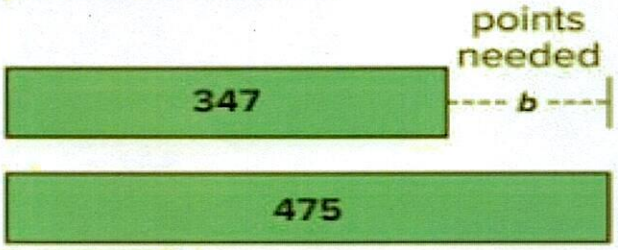
You can use a letter to represent the unknown.

$235 + 112 = a$

$235 + 112 = \mathbf{347}$

Lea has 347 points.

Step 2 Determine how many more points Lea needs.



(−) بسمة

مستطيل كبير

والثاني صغير

$475 - 347 = b$

$475 - 347 = \mathbf{128}$

Lea needs 128 more points.

You can represent each step in a two-step problem using an equation with a letter for the unknown.

Work Together

Students collect books to donate to other schools. The first week they collect 348 books. The next week they collect 405 books. They donate 250 books to one nearby school. How can you represent the number of books they have left to donate?

(+) (−)

① $348 + 405 = C$

$$\begin{array}{r} {\scriptstyle 1} \\ 348 \\ +\ 405 \\ \hline 753 \end{array}$$

② $753 - 250 = b$

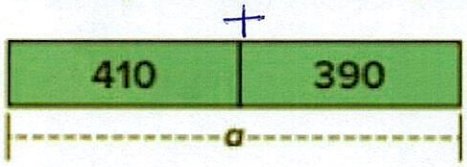
$$\begin{array}{r} 753 \\ -\ 250 \\ \hline 503 \end{array}$$

7	Use letters for unknowns.	Learn+Work Together	80
		(1-4)	81

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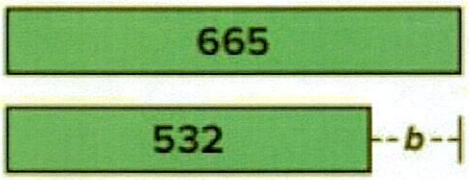
How can you write an equation to represent the bar diagram?

1.



$410 + 390 = a$

2.



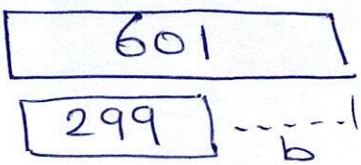
$665 - 532 = b$

OR

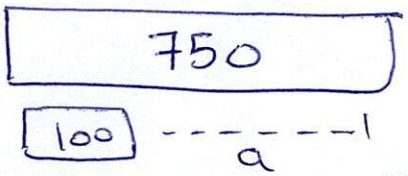
$532 + b = 665$

How can you draw a bar diagram to represent the equation?

3. $601 - b = 299$



4. $100 + a = 750$



لما يكون في unknow 3 ⊕ معناه السالب ⊖

8	Explain the meaning of multiplication as equal groups. Equal groups.	Learn+Work Together	92
		(1-8)	93

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Learn

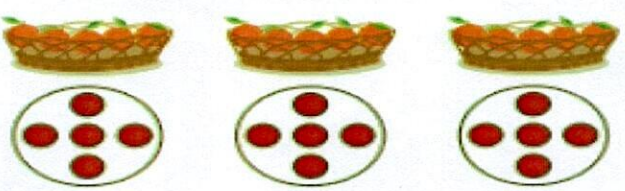
How can you represent the number of peaches in the three baskets?



Each basket is one group.



Each peach is one object.



Each basket has the same number of peaches.

There are 3 **equal groups** with 5 objects in each group.

3 equal groups of 5

$3 \times 5 = 15$

You use **multiplication** to represent equal groups.

Math is... Precision

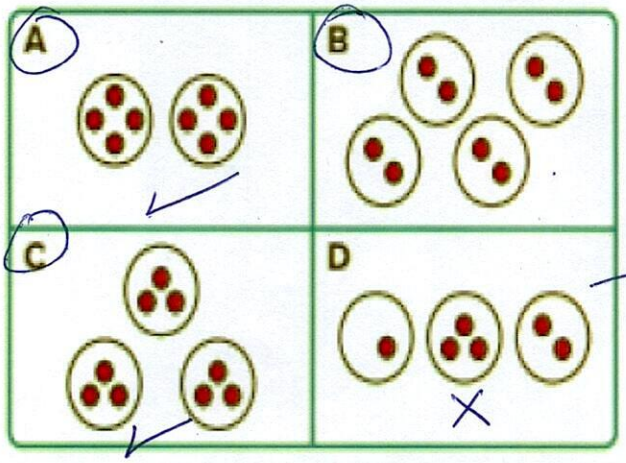
Why is it important to say *equal groups?*

8	Explain the meaning of multiplication as equal groups.	Learn+Work Together	92
		(1-8)	93

Work Together

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Which show equal groups? Explain how you know.

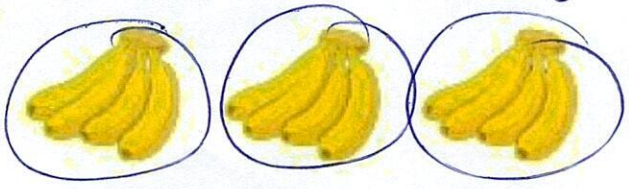


Not same number in each group

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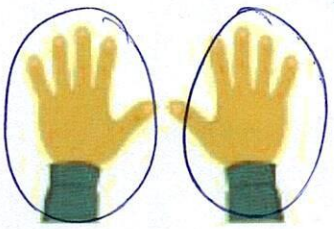
How many? Fill in the blanks.

1. 3 × 4 = 12



3 equal groups of 4

2.



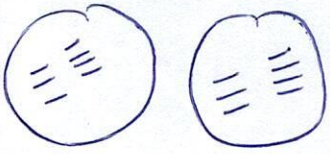
2 × 5 = 10

2 equal groups of 5

How can you represent the equal groups?

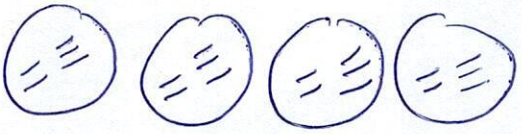
3. 2 equal groups of 7

2 × 7 = 14



4. 4 equal groups of 5

4 × 5 = 20



How many objects?

5. 4 equal groups of 4 pencils

4 × 4 = 16

16 pencils



6. 3 equal groups of 2 mittens

3 × 2 = 6

6 mittens

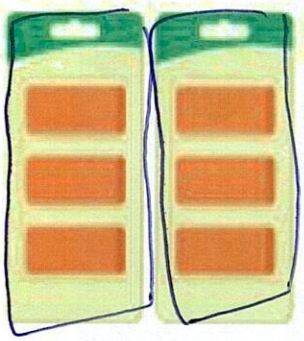


8	Explain the meaning of multiplication as equal groups.	Learn+Work Together	92
		(1-8)	93

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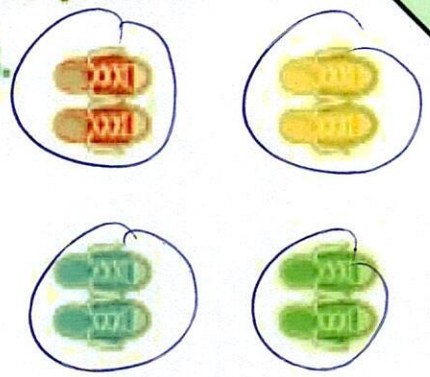
What equation represents the equal groups?

7.



$2 \times 3 = 6$

8.



$4 \times 2 = 8$

9. **STEM Connection** Finn has 3 construction sites. He assigns 8 workers to each site. How many workers does he assign? Explain how you know.

$3 \times 8 = 24$



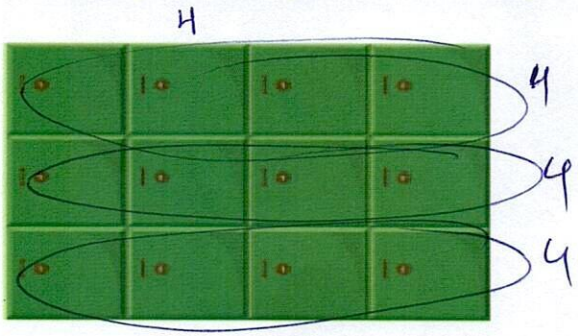


9	Use arrays to represent multiplication.	Array	(1-6)	97

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How many? Complete the equations.

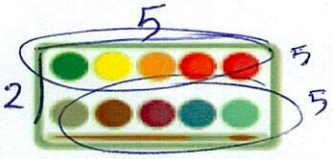
1.



$4 + 4 + 4 = 12$

$3 \times 4 = 12$

2.



$5 + 5 = 10$

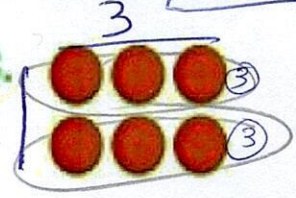
$2 \times 5 = 10$

9	Use arrays to represent multiplication.	(1-6)	97

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Write one addition equation. Write one multiplication equation.

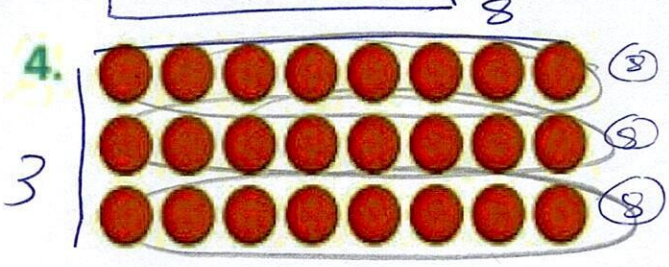
3.



$2 \times 3 = 6$

$3 + 3 = 6$

4.

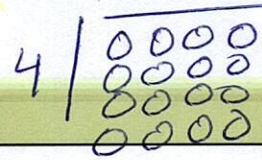


$3 \times 8 = 24$

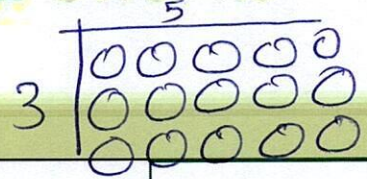
$8 + 8 + 8 = 24$

How can you draw an array to represent the equation?

5. $4 \times 4 = 16$



6. $3 \times 5 = 15$

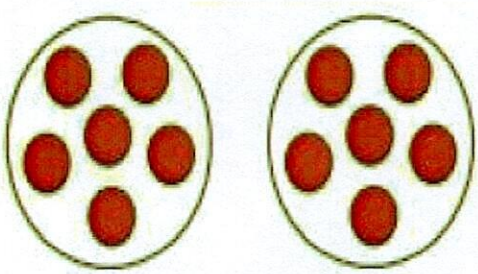


10	Represent division with equal sharing.	(1-8)	107

Page :107

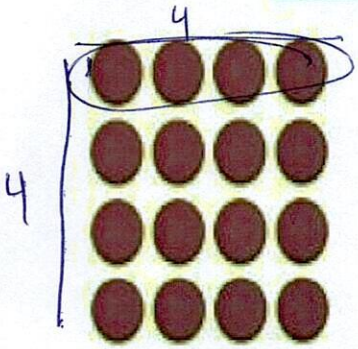
How can you complete the equation?

1. $12 \div 2 =$ 6



Count on one group

2. $16 \div 4 =$ 4



Page :107

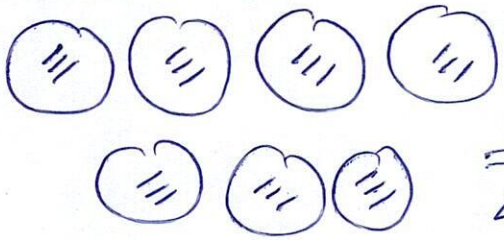
How can you draw a representation for the equation?

3. $18 \div 3 = 6$



✓ = 6

4. $21 \div 7 = 3$



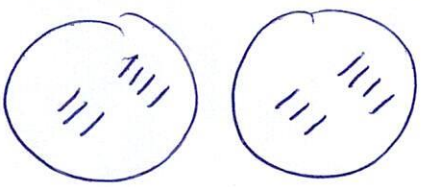
= 3 ✓

5. $24 \div 3 = 8$



= 8 ✓

6. $14 \div 2 = 7$

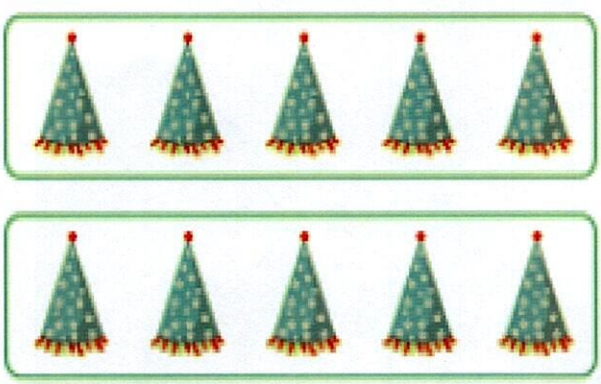


✓ = 7

How can you write a division equation for the representation?

* العسمة نبدأ بالرقم الكبير

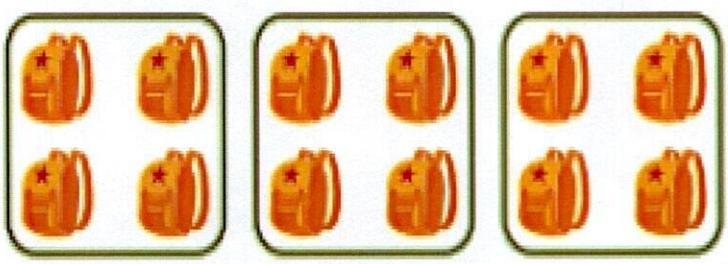
7.



10
2
5

$10 \div 2 = 5$

8.



12
3
4

$12 \div 3 = 4$

Page :111

How can you draw a representation and answer the question?

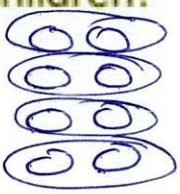
1. 6 dogs ÷
   2 dogs at each water bowl
   How many water bowls?



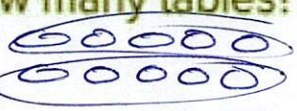
$6 \div 2 = 3$

2. 8 balloons ÷
   2 balloons for each child
   How many children?

$8 \div 2 = 4$



3. 10 plates ÷
   5 plates on each table
   How many tables?



$10 \div 5 = 2$

4. 12 beads ÷
   4 beads for each bracelet
   How many bracelets?



$12 \div 4 = 3$

Which division equation describes the representation?

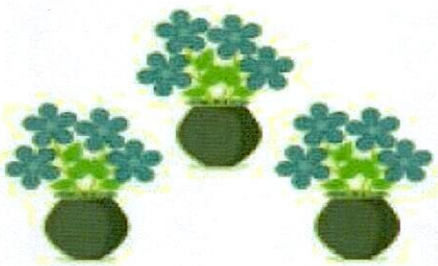
5.



15
3
5

A. $15 \div 3 = 5$
B. $15 = 3 \div 3$
C. $15 \div 5 = 5$
D. $12 \div 5 = 5$

6.



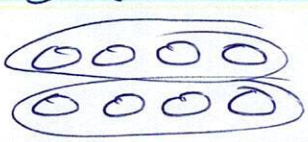
12
3
4

A. $12 \div 4 = 4$
B. $12 = 3 \div 4$ لأنه الصغير
C. $12 \div 5 = 4$
D. $12 \div 3 = 4$

How can you write and solve an equation for the situation?

7. 8 students divided into ÷
   4 groups

$8 \div 4 = 2$



8. 10 players divided into ÷
   2 teams

$10 \div 2 = 5$



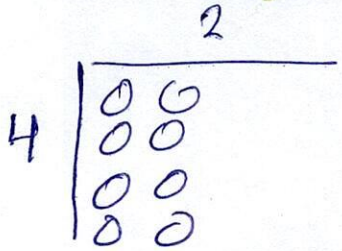
12	Use equal groups and arrays to represent the relationship between multiplication and division.	(1-6)	115
		(8,9)	116

نرسم واحدة إذا الضرب او القسمة لان الجواب واحد

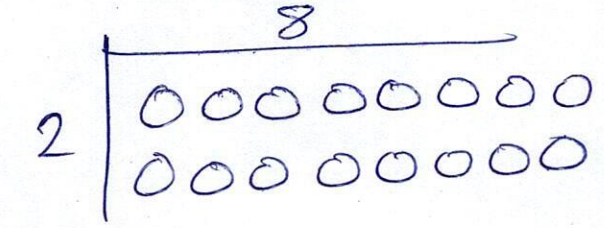
How can you draw an array to represent the situation?

Page :115

1. 4 groups of 2 = 8 (4 × 2 = 8)
   8 divided by 4 = 2



2. 2 × 8 = 16
   16 ÷ 2 = 8



How can you draw an equal group to represent the situation?

3. 4 groups of 3 = 12 (4 × 3 = 12)
   12 divided by 4 = 3

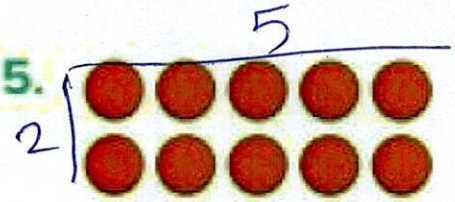


4. 3 × 5 = 15
   15 ÷ 3 = 5



How can you write a division equation for the representation?

5.

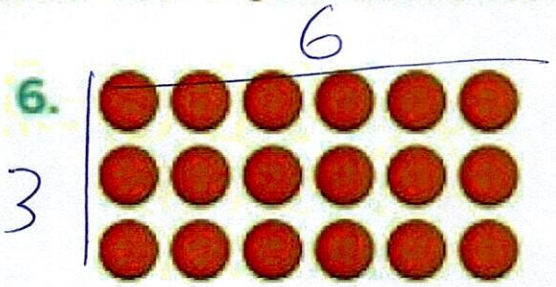


2 × 5 = 10

10 ÷ 2 = 5

10 ÷ 5 = 2

6.



3 × 6 = 18

18 ÷ 3 = 6

18 ÷ 6 = 3

7. Jason says that because he knows 6 × 2 = 12, he also knows a related division equation. Explain why you agree or disagree. Yes

12 ÷ 2 = 6

12 ÷ 6 = 2

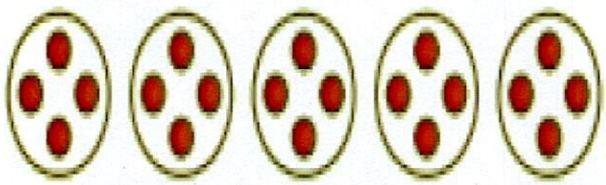
12	Use equal groups and arrays to represent the relationship between multiplication and division.	(1-6)	115
		(8,9)	116

Page :116

Two divide / (4) equations two (multiply

Write a multiplication and a division equation to represent each model.

8.



20
5
4

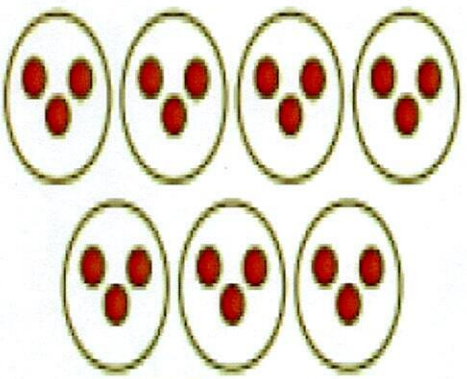
$4 \times 5 = 20$

$5 \times 4 = 20$

$20 \div 5 = 4$

$20 \div 4 = 5$

9.



21
7
3

$3 \times 7 = 21$

$7 \times 3 = 21$

$21 \div 3 = 7$

$21 \div 7 = 3$

13	Describe and use patterns to multiply by 2.	(1-10)	131
		(11-14)	132

1. Byron is making loaves of bread. He uses 2 cups of flour for each loaf. Complete the table to show how many cups of flour he needs for each number of loaves.

Loaves of Bread	Cups of Flour
$5 \times 2 =$	10
$6 \times 2 =$	12
$7 \times 2 =$	14

2. Arya is buying balloons for her two brothers. She wants to give them both the same number of balloons. How can you write an equation to represent the total number of balloons Arya might buy?

2 X number of balloons

Ex $2 \times 2 = 4$

$2 \times 4 = 8$

$2 \times 6 = 12$

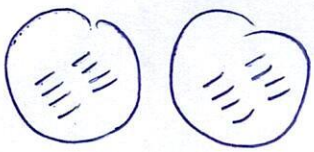
Farida Alhammadi

Page :131

13	Describe and use patterns to multiply by 2.	(1-10)	131
		(11-14)	132

3. Peter is cooking potatoes in a large pot. The recipe calls for 2 minutes of boiling for every pound of potatoes. How many minutes will it take Peter to cook 8 pounds of potatoes?

$2 \times 8 = 16$



4. Draw a line to connect the related equations.

توصيل

$2 \times ? = 4$	$7 + 7 = ? = 14$
$2 \times ? = 10$	$2 + 2 = ? = 4$
$2 \times ? = 14$	$5 + 5 = ? = 10$

How can you complete the equation?

5. $2 \times 9 = \underline{18}$ (9+9=18)

6. $\underline{20} = 2 \times 10$ (10+10=20)

7. $6 \times 2 = \underline{12}$ (6+6=12)

8. $8 = \underline{4} \times 2$



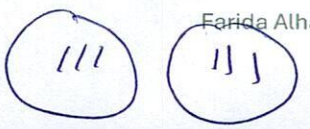
9. $\underline{3} \times 2 = 6$

10. $7 \times 2 = \underline{14}$ (7+7=14)

Page :131

unknown طايكون

one by one توزع



13-	Describe and use patterns to multiply by 2.	(1-10)	131
		(11-14)	132

(x 2) لما اشوف double على

11. STEM Connection Matthew's computer program has 6 lines of code. Grace's computer program has double the number of lines of code as Matthew's. How many lines of code does Grace's program have?



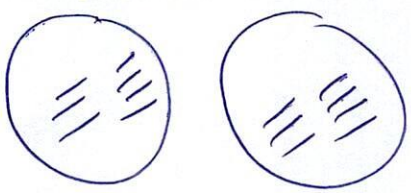
$2 \times 6 = 12$

6

2 | 000000
000000

12. Jenine has 7 pencils. Karly has double the number of pencils Jenine has. How many pencils does Karly have?

$2 \times 7 = 14$



13. Choose the equations that are true.

لازم نثبت يمين = يسار

A. $2 \times 5 = 5 + 5$ ✓ (10 = 10)

B. $2 \times 3 = 2 + 3$ ✗ (6 ≠ 5)

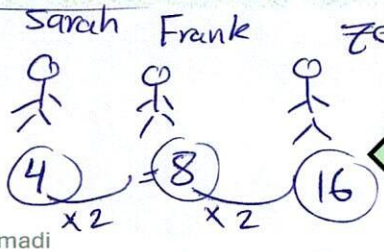
C. $2 \times 6 = 6 + 2$ ✗ (12 ≠ 8)

D. $2 \times 4 = 4 + 4$ ✓ (8 = 8)

14. Extend Your Thinking Sarah has 4 blocks. Frank has double that number of blocks. Zehra has double Frank's number of blocks. How can you find the number of blocks Zehra has?

Frank : $2 \times 4 = 8$

Zehra: $2 \times 8 = 16$



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14.	Describe and use patterns to multiply by 5.	(1-11)	135
		(12-15)	136

Page :135

1. What can you say about the products of ×5 facts?

Product of 5 have 0 or 5 in the ones place.

even even
5 × 4 = 20 * if other factor is even product even

odd odd
5 × 3 = 15 * if other factor is odd product odd

2. Sheila says that knowing 3 × 5 can help you remember 5 × 3. Is she correct? Explain.

3 × 5 = 15 5 × 3 = 15

yes, commutative property.

changing the order of factors does not change the answer

3. Marcel is decorating a poster with stickers. He arranges the stickers into 5 rows. Each row has the same number of stickers. How many stickers might Marcel have in all?

Example

any example

5 × 3 = 15
5 × 4 = 20
5 × 5 = 25
5 × 6 = 30
5 × 7 = 35
5 × 8 = 40
5 × 9 = 45
5 × 10 = 50

How can you complete the equation?

4. 5 × 9 = 45

5. 35 = 5 × 7

6. 6 × 5 = 30

7. 25 = 5 × 5

8. 10 × 5 = 50

9. 3 × 5 = 15

10. 2 × 5 = 10

11. 8 × 5 = 40

14.	Describe and use patterns to multiply by 5.	(1-11)	135
		(12-15)	136

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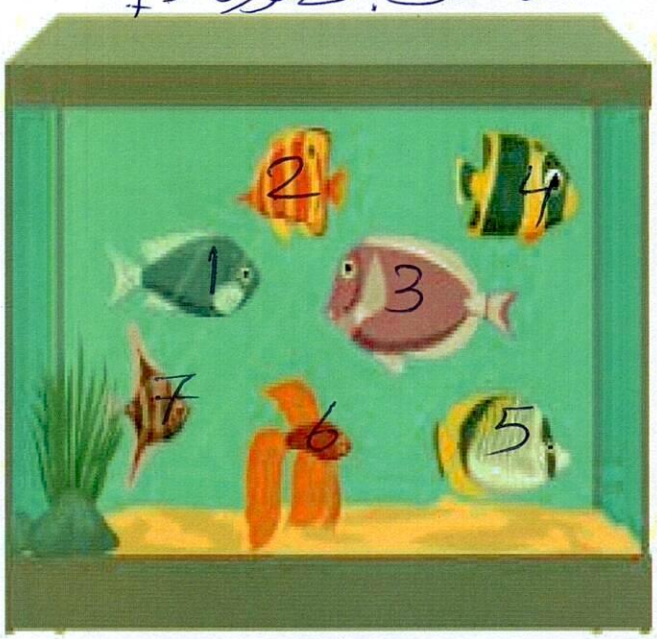
12. Mary Lou does 5 jumping jacks. If she does the same number of jumping jacks for 4 days in a row, how many jumping jacks does Mary Lou do?

$5 \times 4 = 20$

5 10 15 (20)

13. Sara puts the same number of fish shown in each of 5 tanks. How many fish does she have?

7 = نعد السمك بالصورة



$5 \times 7 = 35$

5 10 15 20 25 30 (35)

14. Which equations are true? Choose all that apply.

A. $5 \times 3 = 3 + 3 + 3$ (15 / 9)

B. $3 \times 5 = 5 + 5 + 5$ (15 / 15) ✓

C. $5 \times 2 = 5 + 2$ (10 / 7)

D. $5 \times 4 = 4 + 4 + 4 + 4 + 4$ (20 / 20) ✓

15. Extend Your Thinking Lee has 32 books. He says he can make 5 stacks of books with the same number of books in each stack. Is he correct? Explain.

No, not correct, because (32) not product of 5, [32 not have 0 or 5 in ones place]

Farida Alhammadi

15 -	Describe and use patterns to multiply with 0 and 1.	(1-11)	145
		(12-14)	146

Page :145

How can you complete the equation?

1. $7 \times 1 = \underline{7}$
2. $0 = \underline{0} \times 1$
3. $4 \times \underline{0} = 0$
4. $\underline{1} \times 1 = 1$
5. $0 \times 6 = \underline{0}$
6. $8 = 1 \times \underline{8}$

7. Kelly and Yusif want to share a box of crackers. They open the box and share all of the crackers in the box. They each get 0 crackers. How many crackers were in the box?

$2 \times 0 = 0$

8. Eli checks out some books from the library. He reads 1 book per day. How many days will it take Eli to read all his books?

$1 \times 1 = 1$
$1 \times 2 = 2$
$1 \times 3 = 3$
$1 \times 4 = 4$
$1 \times 5 = 5$
$1 \times 6 = 6$
$1 \times 7 = 7$
$1 \times 8 = 8$
$1 \times 9 = 9$

9. Carter starts playing a new game. He completes 0 levels per day for a week. How many levels will Carter complete by the end of the week?

$0 \times 7 = 0$

Eg: 1, 2, 3, 4, 5, 6, 7 = 7 days

10. Mr. Mustafa buys 1 jersey for each player on his daughter's team. There are 9 players. How can you write an equation to find the number of jerseys he buys?

$1 \times 9 = 9$

11. There are 3 bins. Each bin has 1 book. How can you write an equation to show the number of books there are?

$3 \times 1 = 3$

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12. Which equations are true? Circle all that are correct.

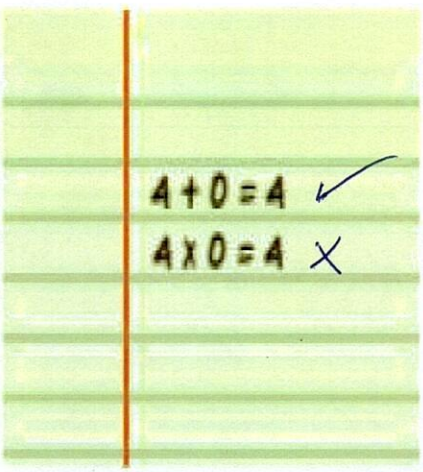
A. $6 \times 0 = 6$ ✗

B. $8 \times 1 = 2 \times 4$ ✓

C. $0 \times 3 = 9 \times 0$ ✓

D. $1 \times 10 = 5 \times 1$ ✗

13. Error Analysis Elijah says that multiplying 4 by 0 is like adding 0 to 4. His work is shown. Do you agree? Explain.



No not same

$4 + 0 = 4$

$4 \times 0 = 0$

14. Extend Your Thinking Does the equation $1 \times 0 = ?$ follow the pattern of multiples of 0, multiples of 1, or both? Justify your reasoning.

Both $1 \times 0 = 0$

$0 \times 1 = 0$

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Learn

Zion fills each of 4 gift bags with 10 stickers, 2 cars, 5 sticky hands, and 1 bottle of bubbles. He puts 0 stamps in the gift bags.



How can he use patterns to determine the number of each type of toy he needs?

When you multiply a digit by 10, the product has the same digit in the tens place and a 0 in the ones place.

$4 \times 10 = 40$ 40 stickers

Math is... Patterns

How are multiplying with 2 and multiplying with 10 the same? How are they different?

Multiples of 2 have a 0, 2, 4, 6, or 8 in the ones place.

$4 \times 2 = 8$ 8 cars



Multiples of 5 have a 0 or 5 in the ones place.

$4 \times 5 = 20$ 20 sticky hands



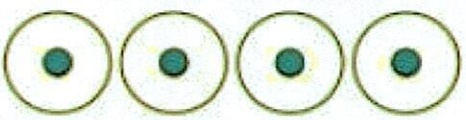
The product of any number and 0 is 0.

$4 \times 0 = 0$ 0 stamps



The product of any number and 1 is itself.

$4 \times 1 = 4$ 4 bottles of bubbles



You can use patterns to help recall facts with factors 0, 1, 2, 5, and 10.

من الصفر Count نبدأ الـ fewer لا نشوف كلمة

Work Together

Dina arranges her stickers into 10 equal rows. Each row has fewer than 7 stickers. How many stickers might Dina have in all?

أقل من 7

يعني

6

0 10 20 30 40 50 (60)

$10 \times 6 = (60)$

نسبع خطوط ونبدأ من الصفر

Count by 10)

How can you use what you know about multiplication to answer the question?

(0, 1, 2, 5, 10)

1. Multiples of 2 and 10 are always even. زوجي

2. Multiples of 10 always have a 0 in the ones place. دائما صفر في الـ ones

3. The product of any number and 1 is itself. نفسه same

4. The product of any number and 0 is always 0. دائما صفر

How can you complete the equation?

5. 5 x 3 = 15

5 10 15

6. 2 x 7 = 14

7+7=14

7. 0 x 8 = 0 صفر

8. 40 = 10 x 4

10 20 30 40

9. 30 = 5 x 6

5 10 15 20 25 30

10. 9 x 1 = 9 نفس الرقم

15	Use known patterns to solve unknown facts.	Learn+Work Together	148
		(1-12)	149

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أقل من 10 نيكل ٩

fewer نقدين الصفر

11. Felix has fewer than 10 nickels in his piggy bank. How many cents might he have? Explain how you know.

5 x 9 = 45

nickels = (5) cents

0 5 10 15 20 25 30 35 40 (45)

عشرطوط ونبدأ من الصفر كانت بـ 5

زوج من ← even number

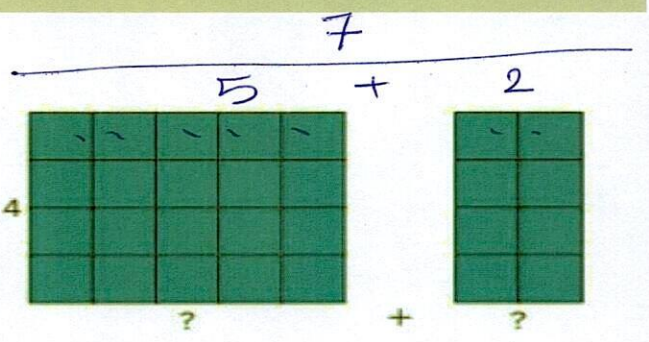
12. The Lee family buys pairs of mittens for their vacation. Can the Lee family buy 17 mittens in all? Explain.

No, 17 odd numbers (must be even to put it in pairs)

17	Demonstrate an understanding of the Distributive Property.	(1-6)	165
		(7-10)	166

Solve. من الصفحة نشبه للقسمة Array لتكون رسمة

1. How can you use the representation to decompose 7?



4 x 7 = 4 x 5 + 4 x 2

4 x 7 = 20 + 8

4 x 7 = 28

2. How can you decompose 9 x 6?

5
4

9 x 6 = 5 x 6 + 4 x 6

9 x 6 = 30 + 24

9 x 6 = 54

Page :165

17	Demonstrate an understanding of the Distributive Property.	(1-6)	165
		(7-10)	166

Page :165

What number makes the equation true?

3. $? \times 7 = 3 \times 7 + 3 \times 7$

$? = 6$

4. $7 \times ? = 5 \times 8 + 2 \times 8$

$? = 8$

5. $1 \times 9 + 5 \times 9 = 9 \times ?$

$6 = ?$

6. $6 \times 2 + 6 \times 2 = 6 \times ?$

$4 = ?$

Page :166

How can you decompose one of the factors to find the product?

7. $8 \times 6 = 4 \times 6 + 4 \times 6$

$8 \times 6 = 24 + 24$

$8 \times 6 = 48$

8. $9 \times 7 = 5 \times 7 + 4 \times 7$

$9 \times 7 = 35 + 28$

$9 \times 7 = 63$

$35 + 28 = 63$

9. $9 \times 8 = 5 \times 8 + 4 \times 8$

$9 \times 8 = 40 + 32$

$9 \times 8 = 72$

10. $8 \times 4 = 4 \times 4 + 4 \times 4$

$8 \times 4 = 16 + 16$

$8 \times 4 = 32$

18	Apply the properties of multiplication to recall 3s facts.	(12-15)	170
		(13,17)	195

Page :170

Choose the correct answer.

12. Which is equal to 3×9?

A. $2 \times 9 + 7 \times 9$

B. $2 \times 1 + 7 \times 9$

C. $3 \times 9 + 1 \times 9$

D. $2 \times 9 + 1 \times 9$

13. Which is equal to 3×6?

A. $2 \times 6 + 1 \times 6$

B. $2 \times 1 + 3 \times 3$

C. $3 \times 6 + 1 \times 6$

D. $3 \times 3 + 1 \times 2$

14. Doris played in 3 basketball games. The number of baskets she made is shown. If all her baskets were 2-pointers, how many points did she score per game? What if they were all 3-pointers? Complete the table.

Number of Baskets	2-Pointers (×2)	3-Pointers (×3)
4	$2 \times 4 = 8$	$3 \times 4 = 12$
3	$2 \times 3 = 6$	$3 \times 3 = 9$
5	$2 \times 5 = 10$	$3 \times 5 = 15$

15. Extend Your Thinking Moustafa decomposes 3 to find the product of 3×8 is 24. Now Moustafa needs to find the product of 8×3. He says he can decompose the fact into 8×2 and add 8. How can Moustafa use a different strategy to solve?

$8 \times 3 = 8 \times 2 + 8 \times 1$

yes $8 \times 2 + 8$

$3 \times 8 = 24$

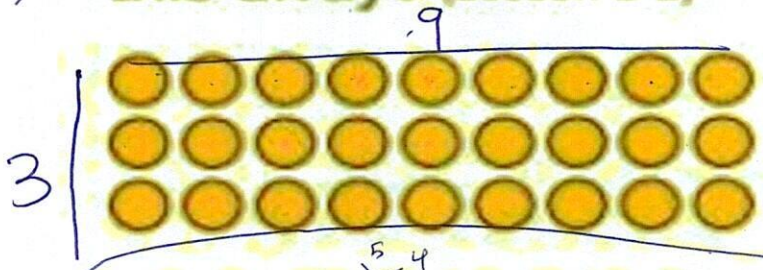
so $8 \times 3 = 24$

commutative

18	Apply the properties of multiplication to recall 3s facts.	(12-15)	170
		(13,17)	195

Page :195

13. Which equation represents how to find the product for this array? (Lesson 5-2)



A. $3 \times 9 = 3 \times 5 + 3 \times 4$ (5 + 4)

B. $3 \times 9 = 3 \times 3 + 5 \times 6$ decompose incorrect

C. $3 \times 9 = 3 \times 5 + 5 \times 5$ incorrect

D. $3 \times 9 = 3 \times 3 + 3 \times 3$ decompose $9 < \frac{3}{3}$ X

17. Find the unknown. (Lesson 5-2)

$7 \times ? = 21$

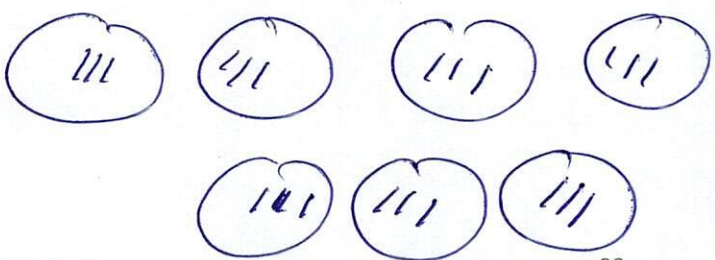
One by one

A. 3

B. 4

C. 5

D. 6



19	Apply the properties of multiplication to recall 6s facts.	(1-7)	177
		(12,16)	195

Name (3) double (6)

How can you use the 3s facts to find the unknown?

Page :177

1. $3 \times 9 = 27$ $3 \times 6 \times 9 = 54$ $27 + 27 = 54$
2. $15 = 3 \times 5$ $30 = 5 \times 6$ $15 + 15 = 30$
3. $24 = 8 \times 3$ $8 \times 6 = 48$ $24 + 24 = 48$
4. $6 \times 3 = 18$ (3 double) $6 \times 6 = 36$

How can you decompose to solve the problem?
Show your thinking.

5. Paul packs 8 boxes of snack bags for a school picnic. There are 6 snack bags in each box. How many snack bags does Paul pack in all?

$3 \times 6 \times 8$
$3 \times 8 + 3 \times 8$
$24 + 24 = 48$

6. Roger places 5 basketballs in each crate. There are 6 crates. How many basketballs does Roger place in crates?

$3 \times 6 \times 5 =$
$3 \times 5 + 3 \times 5$
$15 + 15 = 30$

19	Apply the properties of multiplication to recall 6s facts.	(1-7)	177
		(12,16)	195

16. There are 9 apples in each of 6 bags. How many apples are there? (Lesson 5-4)

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9

6 | ○○○ ○○○ ○○○ / ○○○ ○○○ ○○○ / ○○○ ○○○ ○○○ / ○○○ ○○○ ○○○ / ○○○ ○○○ ○○○ / ○○○ ○○○ ○○○

$3 \times 6 \times 9 =$
$3 \times 9 + 3 \times 9$
$27 + 27 = 54$

19	Apply the properties of multiplication to recall 6s facts.	(1-7)	177
		(12,16)	195

How can you decompose to solve the problem? Show your thinking.

Page :177

5. Paul packs 8 boxes of snack bags for a school picnic. There are 6 snack bags in each box. How many snack bags does Paul pack in all?

3 3 → 6 X 8 =
3 X 8 + 3X8
24 + 24 = 48

6. Roger places 5 basketballs in each crate. There are 6 crates. How many basketballs does Roger place in crates?

3 3 → 6 X5 =
3X5 + 3X5
15 + 15 = 30

7. **Error Analysis** Brittany places action figures on 7 shelves with 6 on each shelf. She decomposes to find the total number of action figures. Do you agree with her work shown below? Explain.

$7 \times 6 = 4 \times 3 + 3 \times 3$
$7 \times 6 = 12 + 9$
$7 \times 6 = 21$

NO / X

No because he decompose two factors only one factor

7 X 6 → 3 3
7X3 + 7X3
21 + 21 = 42

19	Apply the properties of multiplication to recall 6s facts.	(1-7)	177
		(12,16)	195

6X8=48

Page :195

12. The school secretary buys 6 packs of large notebooks with 8 notebooks in each pack. Which equations could be used to find how many notebooks he buys? Select all that apply.

(Lesson 5-4)

A. $3 \times 4 + 3 \times 4 = ?$ (12 + 12 = 24) X
B. $2 \times 3 + 4 \times 5 = ?$ (6 + 20 = 26) X
C. $6 \times 4 + 6 \times 4 = ?$ =48 ✓
D. $5 \times 8 + 1 \times 8 = ?$ =48 ✓
E. $4 \times 4 + 4 \times 1 = ?$ (16 + 4 = 20) X

* إذا اصعب على الطالب يظهر ناتج كل واحد وخلاص

5 1 → 6X8
5X8+1X8

3 3 → 6X8 =
3X8 + 3X8

6X8 → 4 4
6X4 + 6X4

20	Apply the properties of multiplication to recall 7s and 9s facts.	(1-11) & (12-14)	185 & 186
		(7,8)	194

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What number completes the equation?

1. $7 \times 9 = \underline{63}$
2. $9 \times 6 = \underline{54}$
3. $\underline{2} \times 9 = 18$
4. $5 \times 7 = 7 \times \underline{5}$
5. $\underline{3} \times 7 = 21$
6. $\underline{49} = 7 \times 7$
7. $9 \times 9 = \underline{81}$
8. $\underline{9} \times 10 = 10 \times 9$
9. $8 \times 7 = \underline{56}$

How can you decompose to solve?

10. Alex arranges his rock collection in 9 rows with 4 rocks in each row. How can you use a 5s fact to find how many rocks Alex has in all?

5
4
9 X 4 =

5 X 4 + 4 X 4

20 + 16 = 36

11. Lula's mother buys 7 packs of smoothies. Each pack has 6 smoothie bottles. How can you use a 5s fact to find how many smoothies she buys in all?

5
2
7 X 6

5 X 6 + 2 X 6

30 + 12 = 42

20	Apply the properties of multiplication to recall 7s and 9s facts.	(1-11) & (12-14)	185 & 186
		(7,8)	194

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12. Tony knows his 4s and 5s facts well. How can he use properties of multiplication to find the products of 7 x 4 and 9 x 5? Explain your thinking.

5 × (9) × 5
4

5 × 5 + 4 × 5
25 + 20 = (45)

5 × (7) × 4
2

5 × 4 + 2 × 4
20 + 8
= (28)

13. STEM Connection There are 7 rows of desks in Grace's computer lab. Each row has 5 desks. Draw an array to represent her computer lab, and then decompose one of the factors to find the total number of desks in the lab.



5 × (7) × 5
2

5 × 5 + 2 × 5
25 + 10 = (35) ✓

14. Extend Your Thinking Ava has 10 packages of erasers. Each pack has 6 erasers. She gives 1 pack of the erasers to a friend. How many erasers does Ava have left? Show each step.

10 − 1 = 9

5 × (9) × 6
4

5 × 6 + 4 × 6
30 + 24 = (54) ✓

20	Apply the properties of multiplication to recall 7s and 9s facts.	(1-11) & (12-14)	185 & 186
		(7,8)	194

7X4

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7. There are 7 cars in the parking lot, and each car has 4 tires. Which equation could be used to show how many tires there are in total in the parking lot? (Lesson 5-6)

A. $7 \times 4 + 7 \times 1 = ?$

B. $7 \times 2 + 7 \times 2 = ?$ (28)

C. $4 \times 2 + 3 \times 2 = ?$ decompose 2 factors

D. $4 \times 4 + 3 \times 1 = ?$

8. A bucket containing 8 markers is placed on each table. There are 7 tables in the classroom. How many markers are there in all? (Lesson 5-6)

There are 56 markers.

5 > 7 X 8

2

5X8 + 2X8

40 + 16 = 56

21	(a,b) Represent 4-digit numbers in expanded form, word form, and standard form using an understanding of place value.	Learn+Work Together	34
22	Use partial sums to add 3-digit numbers.	Learn+Work Together	56
		(1-7) & (8-12)	57 & 58
23	a) Demonstrate an understanding of the Commutative Property of Multiplication.	(1-7) & (8-12)	103 & 104
	b) Use representations to determine the unknown in a multiplication or division equation.	(1-8)	119
24	Represent a problem with equal groups and an equation.Use equal groups to solve an equation.	Learn+Work Together	152
		(1-8) & (9-11)	153 & 154
25	(a,b) Represent a problem with arrays and an equation.Use arrays and properties of multiplication to solve an equation.	Learn+Work Together	190
		(1-12) & (13-15)	191 & 192

الأسئلة المقالية (الأسئلة الكتابية) FRQ

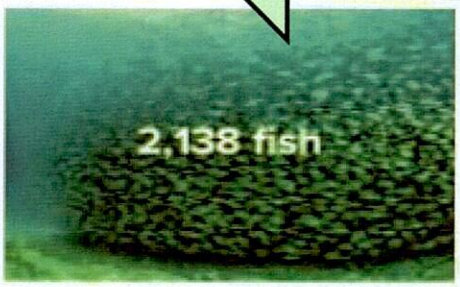
5 أسئلة

الدرجة : (6 -10) درجات

Page :34

Learn

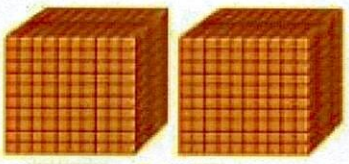
What are some ways to represent this number?



You can use a place-value chart.

thousands	hundreds	tens	ones
2	1	3	8

You can use base-ten blocks.



2 cubes 2,000 | 1 flat 100 | 3 rods 30 | 8 units 8

You can read and write the number in different forms.

standard form	2,138
expanded form	2,000 + 100 + 30 + 8
word form	two thousand, one hundred thirty-eight

4-digit numbers have thousands, hundreds, tens, and ones.

Math is... Generalizations

How is representing 4-digit numbers the same as representing 3-digit numbers?

Work Together

How can you represent 1,208 in expanded form and word form?

1000 + 200 + 8

one thousands, two hundred eight.

Partial Sums

horizontal → vertical

Page :56

Learn

Maggie and Tanesha break apart the addends by place value to add 367 + 145. They show their work in different ways.

hundreds	tens	ones
3	6	7
1	4	5

How can each girl show their work in a different way?

You can **decompose**, or break apart, the addends by place value to find partial sums. Then, add the partial sums to find the sum.

One Way You can write the addends in a row.

367 + 145 = ?

300 + 100 = 400

60 + 40 = 100

7 + 5 = 12

400 + 100 + 12 = 512

Another Way You can stack the addends.

```
  367
+ 145
-----
  400   300 + 100
  100   60 + 40
+  12   7 + 5
-----
  512
```

partial sums

One addition strategy is to find partial sums and add them to find the sum. You can write the addends in this strategy in different ways.

Math is... Explaining

Why is the sum the same when the addends are in a row or stacked?

Work Together

Ari's work is shown. Jun sees Ari's work and says 500 is the sum of 309 + 225. Do you agree? Explain your reasoning.

NO, 500 is a partial Sum, she must to added partial sums all togather to get 534

```
  309
+ 225
-----
  500   300 + 200
   20   0 + 20
+  14   9 + 5
-----
  534
```

Horizontal الكتابة أفقيًا الحل بالـ (decompose)

Vertical الكتابة رأسيًا الحل بالرأسية

Page :57

How can you decompose each addend? What is the sum?

1. 247 + 564 =

200 + 500 = 700
40 + 60 = 100 +
7 + 4 = 11
811

2.
815
+ 148
900
50 +
13 +
963

3.
729
+148
800
60+
17
877

4. 327 + 176 =

300 + 100 = 400
20 + 70 = 90
7 + 6 = 13 +
503

5. Whitney uses partial sums to add. Look at her work to determine which two numbers were in her original equation.

216 + 382 = 598

200 + 300 = 500
10 + 80 = 90
6 + 2 = 8
500 + 90 + 8 = 598

6. How can you determine which addends are in the original equation by looking at the partial products?

The numbers in partial sum equations show the parts of origional addends.

7. Tyrone spent 172 days in school last year. If he attends school the same number of days next year, how many days will he spend in school in two years?

172
+ 172
344

How can you find the sums in a different way?

475
+325
700
90 +
10
800

8. 475 + 325 = 800
400 + 300 = 700
70 + 20 = 90
5 + 5 = 10
700 + 90 + 10 = 800

9.
238
+271
400
100
+ 9
509

200
30
8
238 + 271
200
70
1

200 + 200 = 400
30 + 70 = 100
8 + 1 = 9
509



10. Eleanor's watch shows her steps before lunch. Then she took 486 more steps. How many total steps did she take?

1 1
486
467
953

486 + 467 = 953

11. Error Analysis Amal adds 378 + 141. She decomposes each number and adds 300 + 100 = 400. She writes 378 + 141 = 400. How can you explain her mistake?

part

She need to find the other partial sums, then add all together

12. Extend Your Thinking How can you solve 249 + 401 + 276 using partial sums? Show your work.

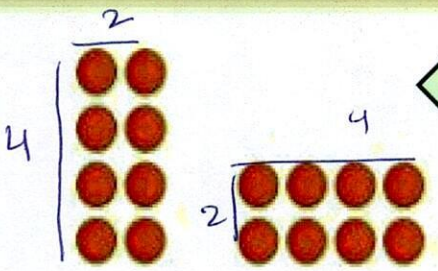
200 40 9
400 1
200 70 6

200 + 400 + 200 = 800
40 + 0 + 70 = 110 +
9 + 1 + 6 = 16
926

23	a) Demonstrate an understanding of the Commutative Property of Multiplication. Commutative	(1-7) & (8-12)	103 & 104
	b) Use representations to determine the unknown in a multiplication or division equation.	(1-8)	119

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1. What two multiplication equations represent these arrays?



$4 \times 2 = 8$ $2 \times 4 = 8$

2. Sam says that 6 × 2 and 2 × 6 have the same product. Do you agree with Sam? Explain why or why not. yes

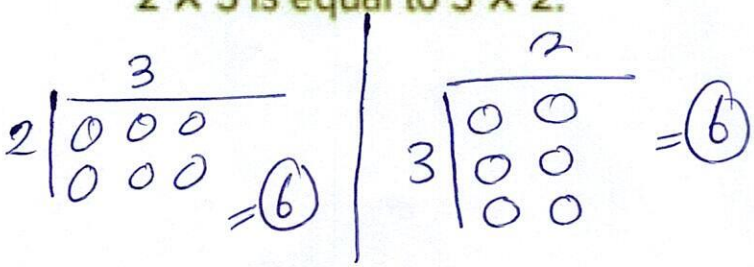


What makes the equation true? Fill in the blank.

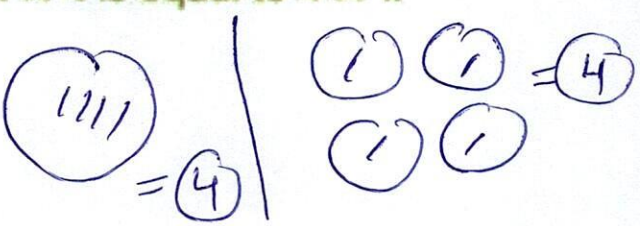
3. $5 \times 6 = 6 \times \underline{5}$

4. $9 \times 0 = \underline{0} \times 9$

5. Use representations to show 2 × 3 is equal to 3 × 2.

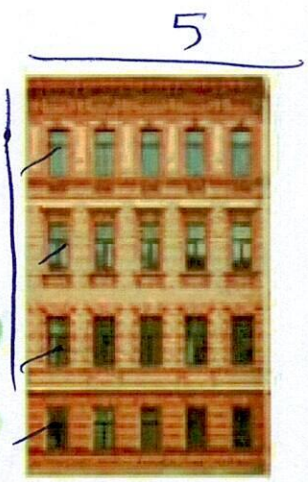


6. Use representations to show 1 × 4 is equal to 4 × 1.



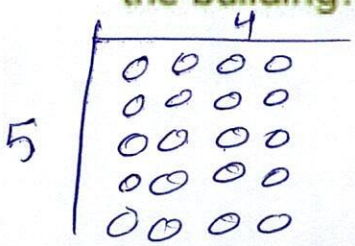
7. **STEM Connection** Finn's construction team just finished placing windows in the building. What two multiplication equations can represent the total number of windows in the front of the building?





$4 \times 5 = 20$

$5 \times 4 = 20$



23	a) Demonstrate an understanding of the Commutative Property of Multiplication.	(1-7) & (8-12)	103 & 104
	b) Use representations to determine the unknown in a multiplication or division equation.	(1-8)	119

8. How can you explain whether this statement is true or false?
$7 \times 2 = 14$, so $14 \times 2 = 7$.

False

because 14×2 not 7

14 must be the answer

$7 \times 2 = 14$ $2 \times 7 = 14$

9. How does knowing the product of 9×6 help you find the product of 6×9?

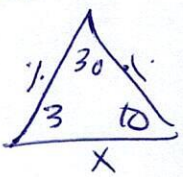
$9 \times 6 = 54$

$6 \times 9 = 54$

10. Use 3, 30, and 10 to write 2 true multiplication equations.

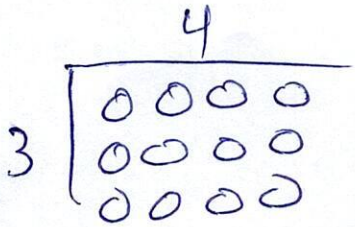
$3 \times 10 = 30$

$10 \times 3 = 30$

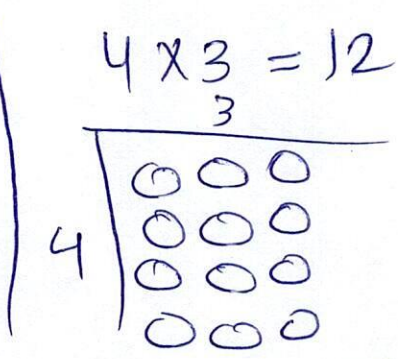


11. Oliver has 3 sheets of stickers with 4 stickers on each sheet. Sara has 4 sheets of stickers with 3 stickers on each sheet. Who has more stickers? Explain.

$3 \times 4 = 12$



$4 \times 3 = 12$

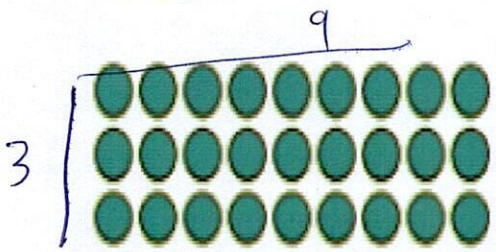


12. Extend Your Thinking Explain how this 3 array represents 9×3 and 3×9.



$3 \times 9 = 27$

$9 \times 3 = 27$



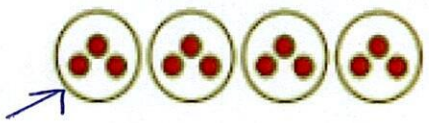
23	a) Demonstrate an understanding of the Commutative Property of Multiplication.	(1-7) & (8-12)	103 & 104
	b) Use representations to determine the unknown in a multiplication or division equation. Find unknown	(1-8)	119

Using equal Sharing (one by one)

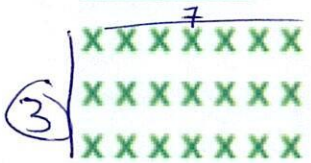
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Use the representation. What is the unknown?

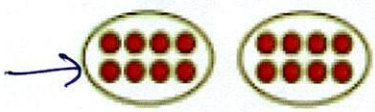
1. $4 \times \underline{3} = 12$



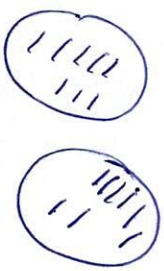
2. $\underline{3} \times 7 = 21$



3. Robert has 16 pencils. He puts an equal number of pencils in 2 boxes. How many pencils does he put in each box?



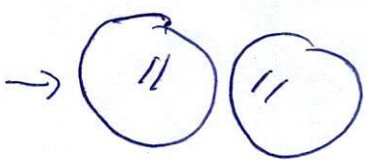
$16 \div 2 = \underline{8}$ $2 \times \underline{8} = 16$



How can you draw a representation to find the unknown?

one by one

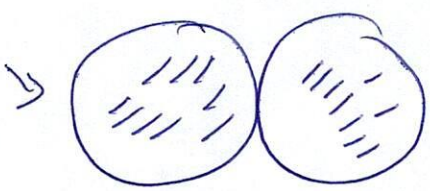
4. $4 \div 2 = \underline{2}$



5. $6 \times \underline{3} = 18$



6. $18 \div 2 = \underline{9}$



7. $\underline{4} \times 3 = \underline{12}$



(2)

8. Lauren and Miguel make 20 paper snowflakes. If they make the same number of snowflakes, how many do Lauren and Miguel each make?

$20 \div 2 = 10$

$2 \times ? = 20$

$2 \times 10 = 20$

24	Represent a problem with equal groups and an equation. Use equal groups to solve an equation. Solve Problem	Learn+Work Together	152
		(1-8) & (9-11)	153 & 154

Page :152

Using equal groups.

Learn

There are 20 children in 5 equal groups on the sky ride.

How many children are in each group?

One Way Use multiplication to represent the problem.

$5 \times ? = 20$



$5 \times 4 = 20$

ثلاث خطوات بالدرس

(1) division equation with unknown

(2) multiply

(3) equal group one by one وتوزع

Another Way Use division to represent the problem.

$20 \div 5 = ?$



$20 \div 5 = 4$

There are 4 children in each group.

You can use a multiplication equation or a division equation to represent and solve problems involving equal groups.

Math is... Patterns

How can you use multiplication patterns to check that your solution is correct?

عدد الطلاب بالسؤال = 20

Work Together

زيادة 10

Ten more children join the group. How can you find the number of children in each of the five carts on the sky ride if there are the same number of children in each cart?

(2) $5X ? = 30$

$20 + 10 = 30$

(1) $30 \div 5 = ?$

$? = 6$

(3)



24	Represent a problem with equal groups and an equation. Use equal groups to solve an equation.	Learn+Work Together	152
		(1-8) & (9-11)	153 & 154

How can you write a multiplication and division equation for the problem? Write a ? for the unknown.

1. Eight friends share 40 apple slices. If each friend receives the same amount of apple slices, how many does each person receive?

$40 \div 8 = ?$
$8 \times ? = 40$
$? = 5$



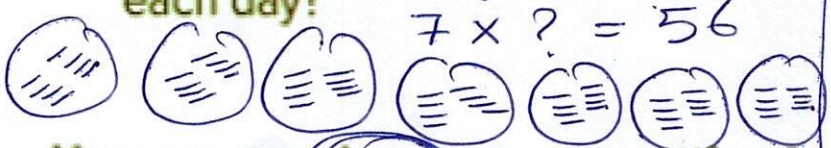
2. Bobbie, Wendy, and Winston spent a total of $21 to go to the movies. If it cost each person the same amount, how much did each person spend?

$21 \div 3 = ?$
$3 \times ? = 21$
$? = 7$



3. Jermaine ran 56 minutes over seven days. If he ran the same amount of time each day, how many minutes did he run each day?

$56 \div 7 = ?$
$7 \times ? = 56$
$? = 8$



4. June earns $25 for working five hours. If she earns the same amount each hour, how much does she get paid per hour?

$25 \div 5 = ?$
$5 \times ? = 25$
$? = 5$

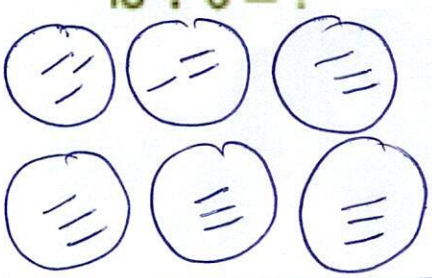


How can you draw a representation for the set of equations?

5. $6 \times ? = 18$
$18 \div 6 = ?$

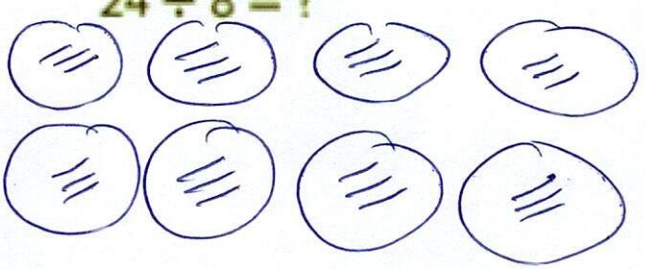
نرسم دائرة واحدة
one by one

$? = 3$



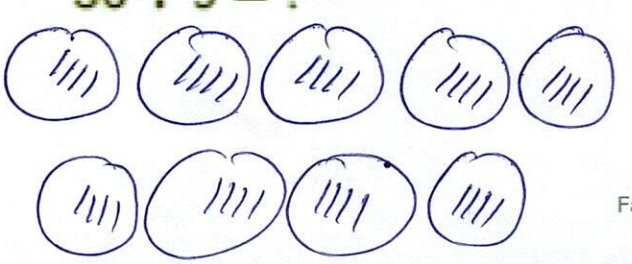
6. $8 \times ? = 24$
$24 \div 8 = ?$

$? = 3$



7. $9 \times ? = 36$
$36 \div 9 = ?$

$? = 4$



8. $3 \times ? = 21$
$21 \div 3 = ?$

$? = 7$



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9. Sam bought tickets to the county fair. How much did each ticket cost if each costs the same amount?

$36 \div 6 = ?$

$6 \times ? = 36$

$? = 6$



10. Carlos spends 35 minutes on homework. He spends the same amount of time on each of his 5 assignments. How long does he spend on each assignment?

$? = 7$

$35 \div 5 = ?$

$5 \times ? = 35$



11. STEM Connection It takes Grace 24 hours to write a computer program for 4 robots. If each program takes the same amount of time to write, how long does it take Grace to write one program? Explain.



$24 \div 4 = ?$

$4 \times ? = 24$



$? = 6$

Solve problem Using Arrays

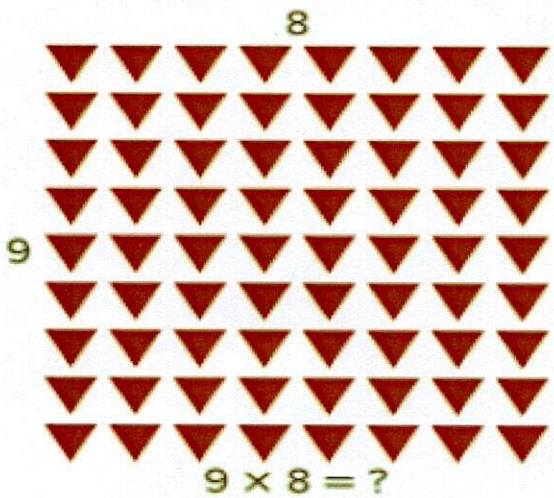
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Learn

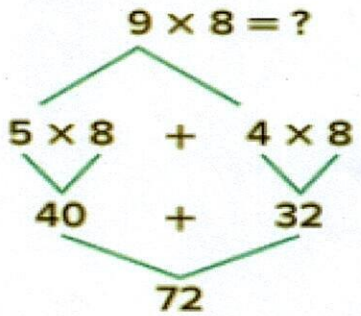
Kyla needs to add 8 flags to each of 9 swimming pool lanes for an upcoming meet.

How many flags does she need in total?

Draw an array and write an equation to represent the unknown in the problem.



Decompose a factor to help you find the product.



$9 \times 8 = \mathbf{72}$

Kyla needs 72 flags.

You can represent a multiplication problem with an array and equation.

You can decompose a factor to help you solve the problem.

Math is... Structure

How could you decompose 8, instead of 9, to solve the problem?

Work Together

An artist places 7 clay bowls on each of 6 shelves in a display case. How can you decompose a factor to find the number of bowls the artist displays?

$5 \times 7 \times 6 =$

$5 \times 6 + 2 \times 6$

$30 + 12 = 42$

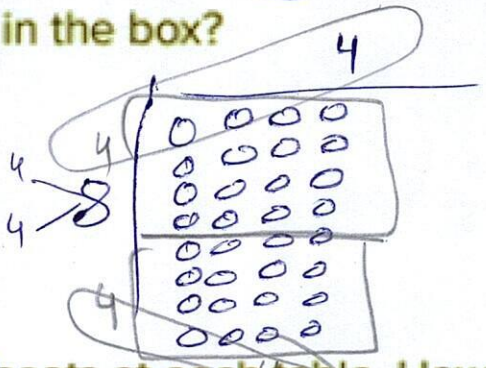
25	(a,b) Represent a problem with arrays and an equation.Use arrays and properties of multiplication to solve an equation.	Learn+Work Together	190
		(1-12) & (13-15)	191 & 192

How can you draw an array and decompose a factor to show your work?

1. A box of soup cans is arranged in 8 rows with 6 cans in each row. How many cans of soup are in the box?

4 → 8 X 4
4

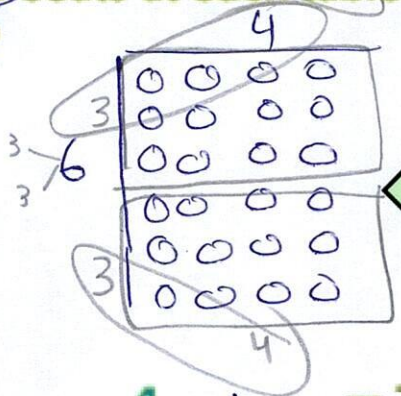
4X4 + 4X4
16 + 16 = 32



2. The cafeteria has 6 tables and 4 seats at each table. How many seats are in the cafeteria?

3 → 6 X 4
3

3 X 4 + 3 X 4
12 + 12 = 24



What completes the equation?

3. 8 x 5 = 40

4. 42 = 7 x 6

5. 6 x 9 = 54

6. 3 x 7 = 21

7. 9 x 3 = 27

8. 4 x 9 = 36

9. 7 x 8 = 56

10. 72 = 9 x 8

11. 32 = 4 x 8

12. 4 x 7 = 28

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13. STEM Connection Finn is drawing a picture of a hotel. The first floor has 9 hallways with 9 doors in each hallway. The second floor has 9 hallways with some doors in each hall.



a. How many doors are on the first floor?

5
4 → 9 X 9 = 81

5X9 + 4X9
45 + 36
= 81

b. How many doors are on the second floor if there are 6 doors in each hallway?

5
4 → 9 X 6 = 54

5X6 + 4X6
30 + 24 = 54

14. Sawyer wants to find 7 x 9. She starts by drawing an array. Number her next steps in the correct order to find the product.

2 She finds the products 7 x 4 and 7 x 5.

4 She finds the product of 7 x 9 = 63.

1 She decomposes the factor 9 into 4 and 5.

3 She adds 28 and 35.

① 7 X (9) → 5, 4

② 7X5 + 7X4

③ 35 + 28

④ = 63

15. Extend Your Thinking Braxton lost his homework assignment, but he still has his answer sheet. For one of the problems, he drew an array with one factor decomposed into 5 and 2. What might have been the problem? Explain.

5+2=7

the equation have factor

Example:-

5
2 → 7 X 8 = 5X8 + 2X8
40 + 16 = 56

7 → 5 + 2