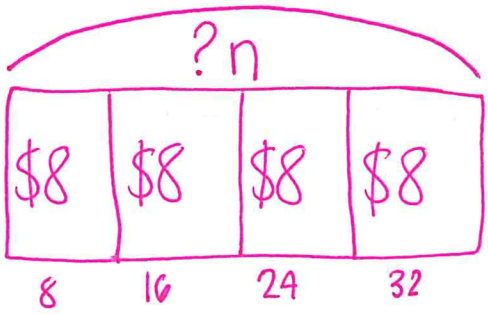
Name Answer Key Date

1. Aunt Korina and her 3 friends decide to share a cab to go to the mall. If they each spent $8, how much did the cab ride cost altogether? Write an equation using a letter to represent the unknown. Solve.



$4 \times \$8 = n$ n=total cost of the cab ride

The cab ride cost $32.

2. Aunt Korina's 3 friends each order pasta and a lemonade for lunch. Aunt Korina orders only chicken salad.

Lunch Menu	
Pasta	$5
Chicken Salad	$6
Lemonade	$1

$6

a. Use the menu to find how much they spend altogether. Write equations using letters to represent the unknown. Solve.

F = the amount spent by Aunt Korina's friends

F = 6 6 6

$18

K = the amount spent by Aunt Korina

K = 6

F + K = 18 + 6
= $24

They spent $24 altogether.

b. Aunt Korina mentally checks the total using $4 \times \$6$. Explain her strategy.

3 friends each spend $6. Aunt Korina also spends $6. They spend 4 x $6 altogether. The tape diagrams above also show 4 units of $6.

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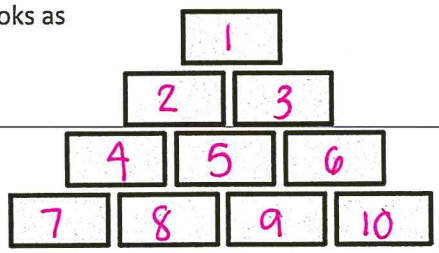
3. After lunch, the friends notice a sale. Compare the crossed out prices to the new sale prices. If all sale prices are calculated in the same way, what would the sale price be on an item that originally cost $18? Use words and equations to explain how you know.

$18 ÷ 3 = $6

The sale price is $6. The sale price is found by dividing the original price by 3.

4. a. A shopkeeper in the bookstore arranges the boxed sets of books as shown to the right.



If each box contains 9 books, how many books are there?

- Write an equation using a letter to represent the unknown, and then solve.
- Explain how you know your answer is reasonable.

10 x 9 = n

n = total number of books

n = 90

Since there are 10 boxed sets of books and 9 books are in each set, I had to multiply 10 x 9 to find the total number of books which is 90.

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b. Aunt Korina figures out how many books are in the arrangement. Her work is shown below. Explain Aunt Korina's strategy.

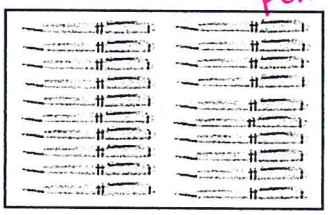
$10 \times 10 - 10 = 90$

Aunt Korina found 10 tens, and then subtracted 1 ten to get 9 tens. 9 tens is 9x10, which is the same as 10x9.

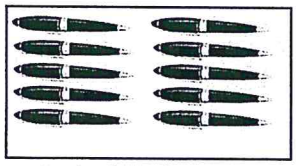
(10x10) -10 = 90
100 -10 = 90

c. In the book store, Aunt Korina buys 2 boxes of pens. Each box contains 2 bundles of 10 gray pens. Her friend buys 4 packs of pens. Each pack contains 10 black pens. Explain how the equation below shows how Aunt Korina and her friend buy the same number of pens.

black pens → $4 \times 10 = (2 \times 2) \times 10$ ← grey pens
$4 \times 10 = 4 \times 10$



Box of Gray Pens



Pack of Black Pens

2x2x10 represents Korina's total grey pens.

4x10 represents her friends total pens.

We know they buy the same number of pens because 2x2=4, so 2x2x10 is the same as 4x10. They both have 40 pens.

4x10 = 2x2x10
4x10 = 4x10
40 = 40

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5. Complete as many problems as you can in 100 seconds. The teacher will time you and tell you when to stop.

2 x 1 = 2	4 ÷ 2 = 2	2 = 10 ÷ 5	3 x 3 = 9	2 x 2 = 4
2 x 6 = 12	21 ÷ 7 = 3	8 x 3 = 24	27 = 9 x 3	3 = 30 ÷ 10
5 x 3 = 15	8 ÷ 2 = 4	4 x 3 = 12	4 = 16 ÷ 4	6 x 4 = 24
9 x 4 = 36	7 x 5 = 35	40 ÷ 8 = 5	15 = 3 x 5	5 x 4 = 20
7 x 5 = 35	6 = 54 ÷ 9	6 x 6 = 36	8 x 6 = 48	24 ÷ 4 = 6
9 x 6 = 54	7 = 49 ÷ 7	8 x 7 = 56	42 = 6 x 7	21 ÷ 3 = 7
7 x 7 = 49	7 x 9 = 63	8 = 64 ÷ 8	6 x 8 = 48	32 = 4 x 8
24 ÷ 3 = 8	81 ÷ 9 = 9	63 ÷ 7 = 9	8 x 9 = 72	9 x 9 = 81

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