

NS3-56 Division and Multiplication

Remember: $10 \div 2 = 5$ tells us that $10 \div 5 = 2$, and $5 \times 2 = 10$ tells us that $2 \times 5 = 10$. You can rewrite any **division** sentence as a **multiplication** sentence.

Example: 10 divided into sets of size 2 equals 5 sets or $10 \div 2 = 5$.



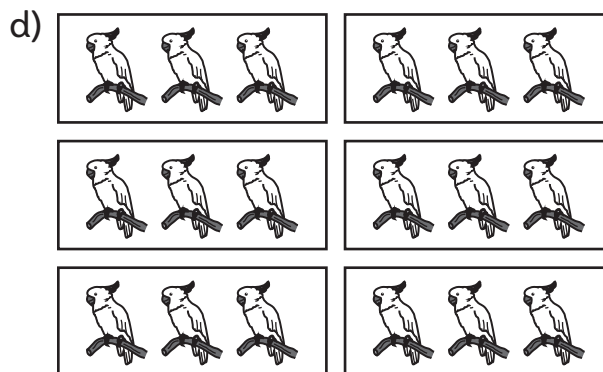
You can rewrite this as: 5 sets of size 2 equals 10 or $5 \times 2 = 10$.

I. Write two multiplication sentences and two division sentences for the picture.









2. Fill in the blanks.



_____ lines in total
 _____ lines in each set
 _____ sets



_____ lines in total
 _____ sets
 _____ lines in each set



_____ lines in each group
 _____ groups
 _____ lines



_____ lines in each group
 _____ lines
 _____ groups

3. Draw a picture to show the situation.

- a) 12 lines altogether, 3 lines in each set, 4 sets
- b) 8 lines, 4 lines in each set, 2 sets
- c) 5 sets, 3 lines in each set, 15 lines in total
- d) 12 lines, 2 sets, 6 lines in each set
- e) 10 lines, 5 in each set, 2 sets

4. Draw a picture to show the situation. Then write two division sentences and two multiplication sentences.

- a) 20 lines, 5 sets, 4 lines in each set
- b) 15 lines, 5 lines in each set, 3 sets

5. Draw a picture to find the missing information.

- | | | |
|------------------------|-------------------------|-------------------------|
| a) 5 lines in each set | b) 18 lines | c) _____ lines in total |
| _____ sets | _____ lines in each set | 3 groups |
| 15 lines altogether | 3 sets | 4 lines in each group |

NS3-57 Knowing When to Multiply or Divide

I. Multiply or divide to find the missing information (?).

	Total Number of Things	Number of Sets	Number in Each Set	Multiplication or Division Sentence
a)	?	8	2	$8 \times 2 = 16$
b)	27	3	?	$27 \div 3 = 9$
c)	20	?	5	
d)	10	2	?	
e)	?	4	8	
f)	21	7	?	
g)	32	8	?	
h)	45	?	9	
i)	64	8	?	
j)	81	9	?	
k)	72	?	8	
l)	16	4	?	
m)	28	?	7	
n)	42	6	?	
o)	?	8	9	

2. Write a multiplication or division sentence to solve the problem.

a) 15 things in total
5 things in each set

How many sets?

b) 5 sets
4 things in each set

How many in total?

c) 24 things in total
6 sets

How many in each set?

d) 4 groups
7 things in each group

How many in total?

e) 2 things in each set
12 things in total

How many sets?

f) 5 groups
45 things in total

How many in
each group? _____

g) 5 things in each set
4 sets

How many in total?

h) 8 things in each set
3 sets

How many in total?

i) 16 things in total
8 sets

How many in each set?

j) 3 things in each set
6 sets

How many in total?

k) 12 things in total
4 sets

How many in each set?

l) 20 things in total
4 sets

How many in each set?

3. Make up your own problem with things in sets.
Draw a picture to solve it.

NS3-58 Knowing When to Multiply or Divide: Word Problems

I. Fill in the table. Use a question mark to show what you don't know.

	Total Number of Things	Number of Sets	Number in Each Set	Multiplication or Division Sentence
a) 20 people 4 vans	20	4	?	$20 \div 4 = ?$
b) 3 marbles in each jar 6 jars	?	6	3	$6 \times 3 = ?$
c) 15 flowers 5 pots				
d) 4 chairs at each table 2 tables				
e) 20 flowers 4 in each row				
f) 6 seats in each row 2 rows				
g) 18 houses 9 houses on each block				
h) 15 chairs 3 rows				
i) 6 tents 3 campers in each tent				
j) 9 boxes 3 sea shells in each box				
k) 6 legs on each insect 42 legs				

2. Find the missing number in each part of Question I.

The fact family for the multiplication sentence $3 \times 5 = 15$ is:

$3 \times 5 = 15$

$5 \times 3 = 15$

$15 \div 3 = 5$

$15 \div 5 = 3$

3. Complete the fact family for the given multiplication or division sentence.

a) $4 \times 2 = 8$

b) $5 \times 6 = 30$

c) $10 \div 2 = 5$

d) $12 \div 4 = 3$

e) $9 \times 3 = 27$

f) $6 \times 8 = 48$

4. Armand plants 24 trees in 3 rows. How many trees are in each row?

5. Alex plants 4 rows of trees with 7 in each row. How many trees did she plant?

6. A canoe can hold 3 people.

a) How many canoes are needed for 21 people?

b) How many people can go canoeing with 5 canoes?

7. You need 3 tickets to ride the roller coaster at the amusement park.

a) Mandy, Tom, and Jane want to ride the roller coaster. How many tickets will they need altogether?

b) How many tickets are needed for 8 people?

BONUS ► Kim has 17 tickets. If she pays for herself and 4 of her friends, how many tickets will she have left?

NS3-59 Multiplication and Division (Review)

1. What is the fact family for $2 \times 3 = 6$?

2. Find the mystery number.

- a) I am a multiple of 2.
I am greater than 10 and less than 13.
- b) I am a multiple of 3.
I am between 13 and 20.
I am an even number.



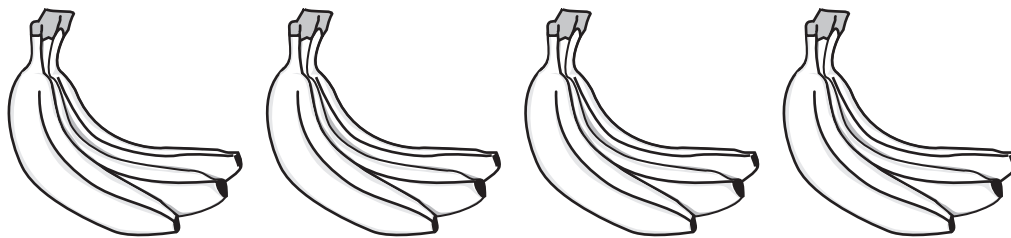
3. A hummingbird feeds 6 times each hour.
How many times does it feed in 7 hours?

4. Apple trees in an orchard are planted in 7 rows.
There are 4 trees in each row.

- a) How many trees are in the orchard?
- b) How did you find your answer? Mental math?
Skip counting? A picture?

5. 6 is twice as much as (or double) 3. Is 6×5 twice as much as 3×5 ? Use an array to decide.

6. Fill in the blanks. Then write two division sentences and one multiplication sentence using the boxes.



_____ bananas

_____ bananas in each bunch

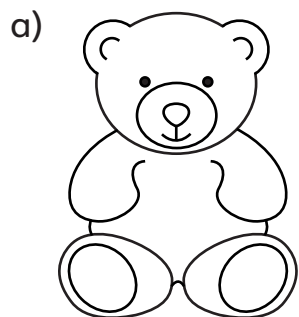
_____ bunches

$$\square \div \square = \square$$

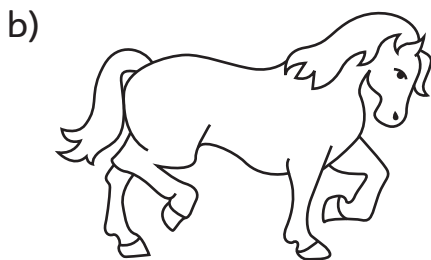
$$\square \div \square = \square$$

$$\square \times \square = \square$$

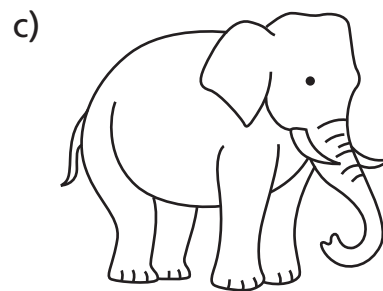
7. A shelf is 40 cm long. How many stuffed animals of each type would fit end to end?



5 cm wide

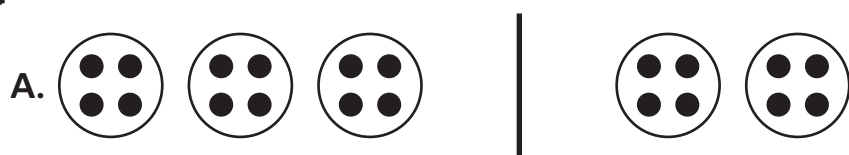


4 cm wide

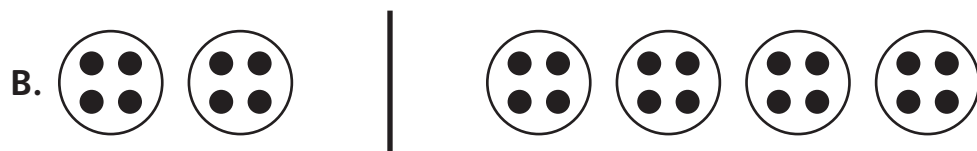


8 cm wide

8. Picture A shows that 5 sets of 4 equals 3 sets of 4 plus 2 sets of 4.



What does picture B show?



9. Fill in the blanks with the numbers 2, 3, and 4 to make the number sentence true.

a) $\underline{\quad} \times \underline{\quad} + \underline{\quad} = 11$

b) $\underline{\quad} \div \underline{\quad} + \underline{\quad} = 5$

10. Clara divided one number by another and got the answer 3. What might the numbers have been?

11. Make up a story problem for the number sentence. Draw a picture with counters to show the answer.

a) $5 \times 4 = 20$

b) $12 \div 3 = 4$

BONUS ▶ A hawk's nest holds at least 3 eggs and at most 5 eggs.

a) What is the **least** number of eggs 3 nests would hold?

b) What is the **greatest** number of eggs 3 nests would hold?

