



# Helping With Math

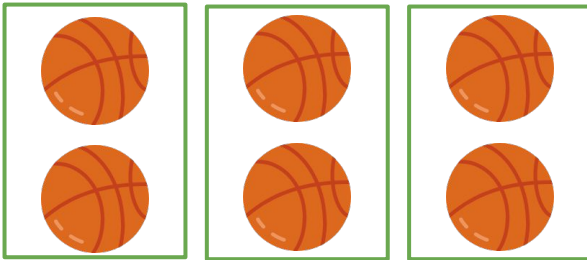
## Understanding Multiplication as Repeated Addition



**GRADE 3**



Multiplication can be defined as the concept of having a certain number of groups of the same size. The said concept can be solved through repeated addition.



Hi! I'm Stan, the basketball team captain of the Warrior juniors. I have a question, can you make a multiplication equation and a repeated addition out of these group of basketball?



### REPEATED ADDITION

- ❑ It is the process of repeatedly adding the same number
- ❑ A strategy for introducing Multiplication



# MULTIPLICATION AS REPEATED ADDITION

## MULTIPLICATION AS REPEATED ADDITION

- ❑ Repeated Addition is simply adding equal groups together
- ❑ It is also known as Multiplication: if the same number is repeated, it can be written in the form of multiplication

### DEFINITION

Repeated addition is helpful in learning multiplication. For example, if one does not know  $5 \times 3$  facts yet, one may find it easier to work out  $5 \times 3$  by writing  $3 + 3 + 3 + 3 + 3$  or  $5 + 5 + 5$ ; then slowly add.



### FUN FACT

On a number line, one can skip count to add repeatedly and / or to multiply



# MULTIPLICATION AS REPEATED ADDITION

## PARTS OF MULTIPLICATION SENTENCE



Multiplicand

The number to be multiplied

$$\begin{array}{r} 7 \\ \times 6 \\ \hline 42 \end{array}$$

Multiplier

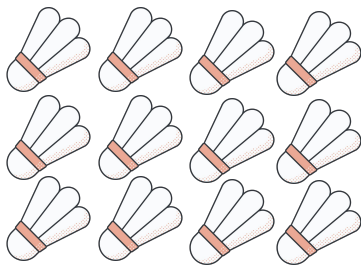
It tells how many times the number is to be multiplied



Product

The answer or result obtained

### EXAMPLE



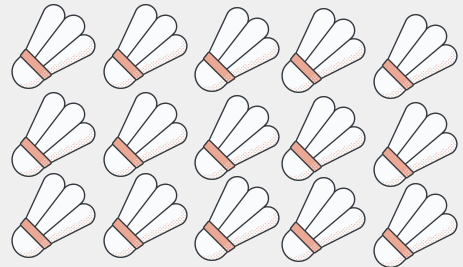
$$3 + 3 + 3 + 3 = 12$$

$$3 \times 4 = 12$$

$$4 + 4 + 4 = 12$$

$$4 \times 3 = 12$$

### EXERCISE

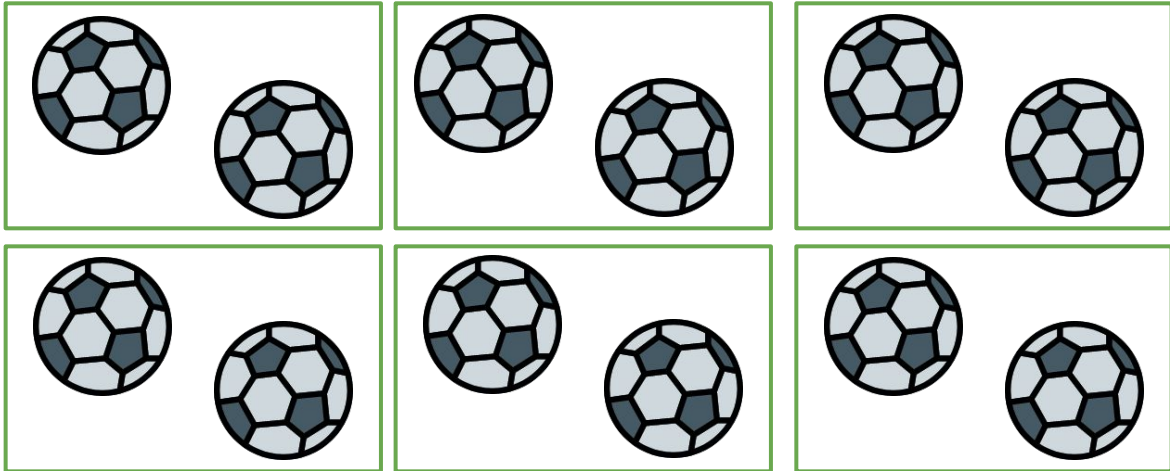





# MULTIPLICATION AS REPEATED ADDITION

## EXAMPLE IN WORD PROBLEM

There are 6 groups of footballs. Each group has 2 footballs. How many footballs are there in all?



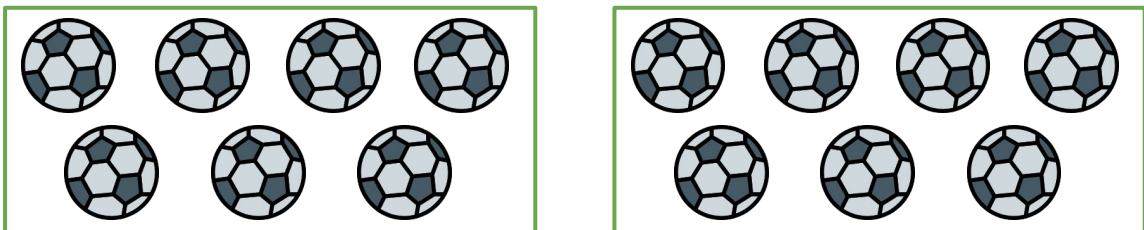
Add to find the total footballs.

$$2 + 2 + 2 + 2 + 2 + 2 = 12$$

Multiply to find the total footballs.

$$6 \times 2 = 12$$

There are 2 groups of footballs. Each group has 7 footballs. How many footballs are there in all?



Repeated Addition

Multiplication



# TABLE OF ACTIVITIES

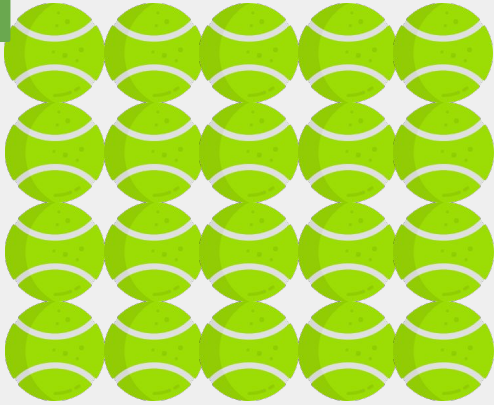
1. The Sporty Heads
2. The 2nd Ball Pool Cup
3. The Olympic Swimming Competition
4. The Tennis Cup
5. The Olympic Squad
6. Goal!
7. Shoot that Ball
8. The Cycle Race
9. Time out!
10. The Olympic Journey



# THE SPORTY HEADS

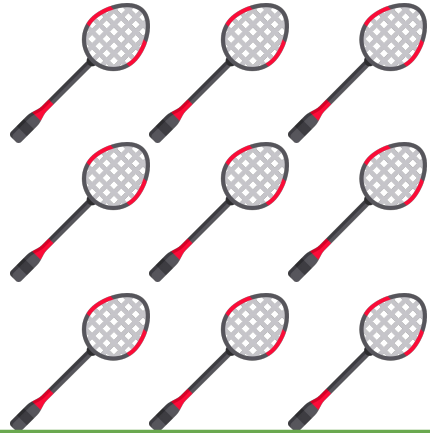
It's time to play your favorite sport/s! Complete the multiplication equation that describes each array.

1.

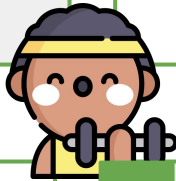


$$4 \times \square = 20$$

2.



$$\square \times 3 = 9$$



3.



$$2 \times \square = 10$$

4.

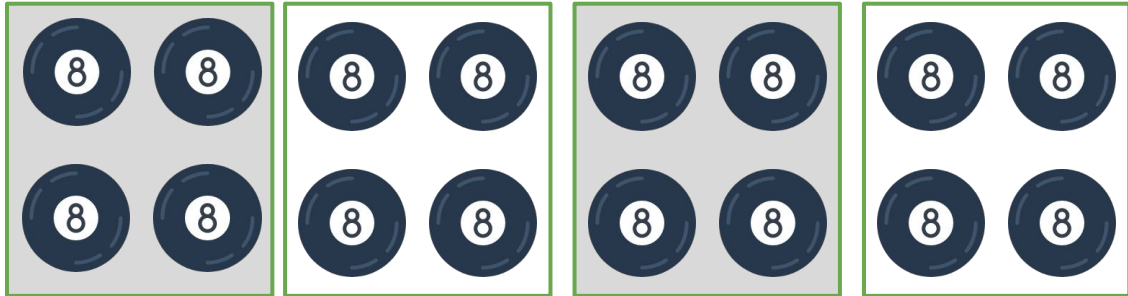


$$\square \times 5 = 15$$

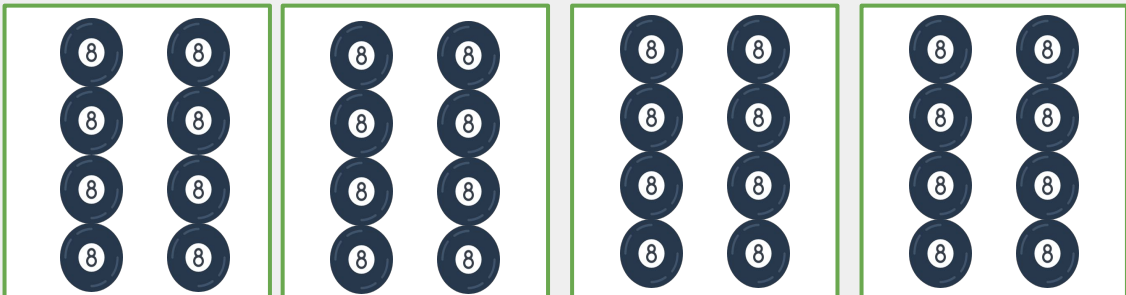


# THE 2ND BALL POOL CUP

Help Lazarus to win his first ball pool competition! Use repeated addition to find the total number of objects in each equation below. Show your complete solution.



1. Repeated Addition:

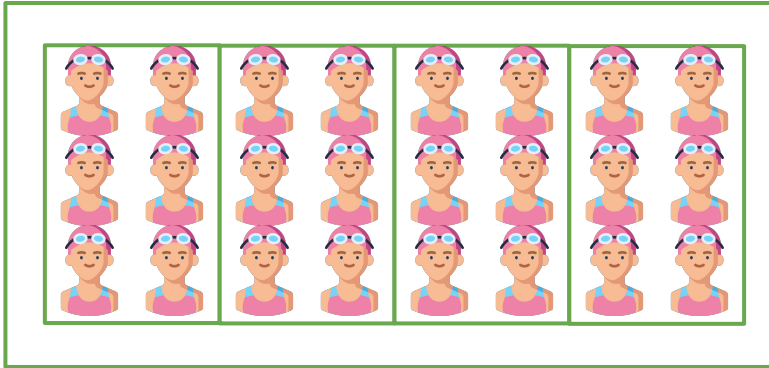


2. Repeated Addition:



# THE OLYMPIC SWIMMING COMPETITION

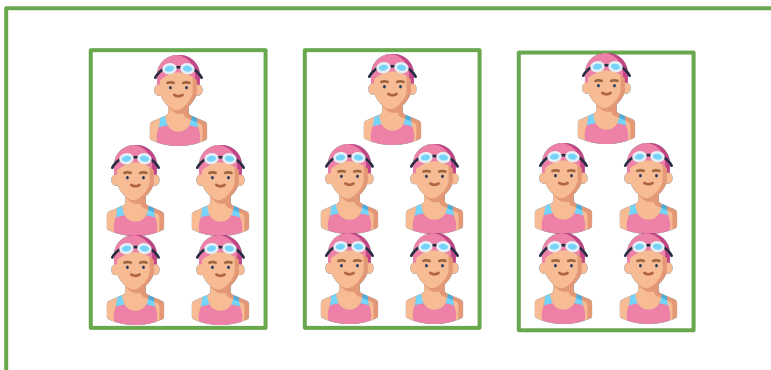
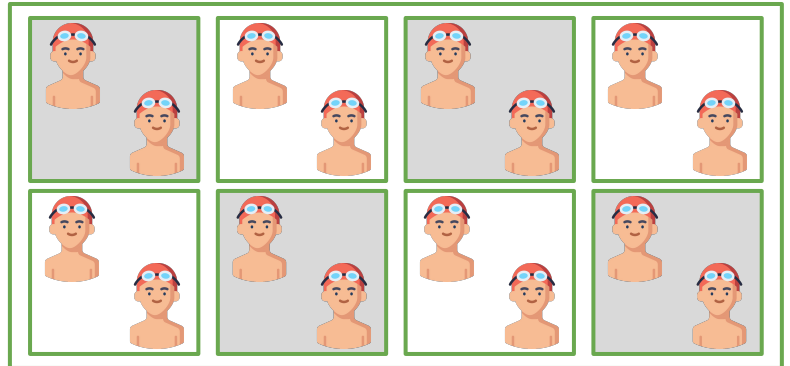
Help Ana to determine how many contestants are included in the swimming competition. Use repeated addition to find the total number of swimmers in each given below. Write only your answer.



1.



2.



3.

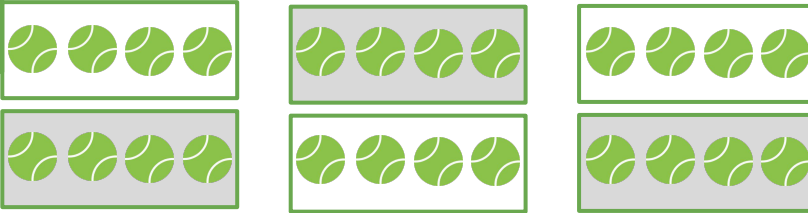




# THE TENNIS CUP

Help Roger win this game! Write the repeated addition sentence and multiplication sentence for each array.

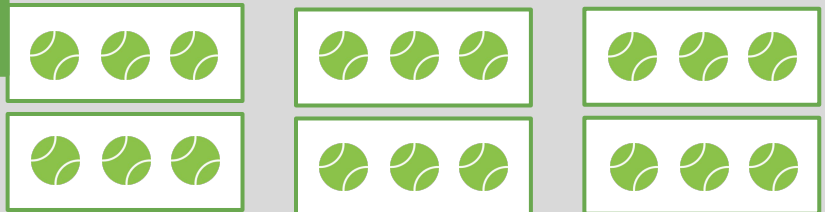
3.



Repeated Addition:

Multiplication:

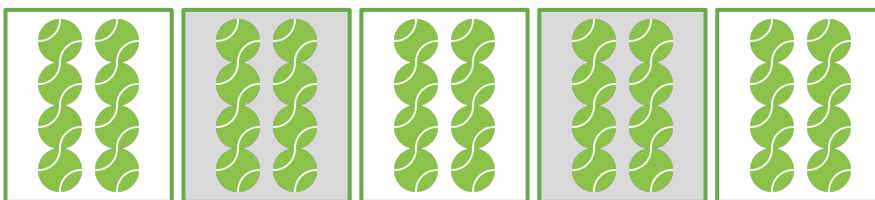
2.



Repeated Addition:

Multiplication:

1.



Repeated Addition:

Multiplication:

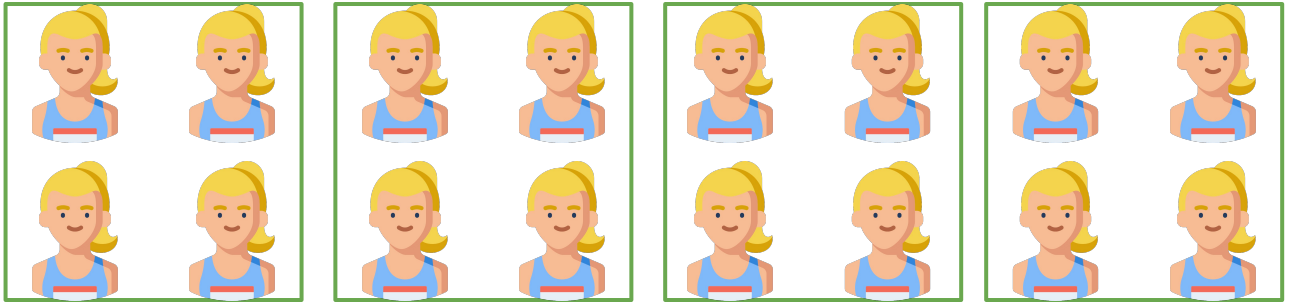


# THE OLYMPIC SQUAD

Here are your favorite players! Complete the addition and multiplication sentence for each picture.

1.

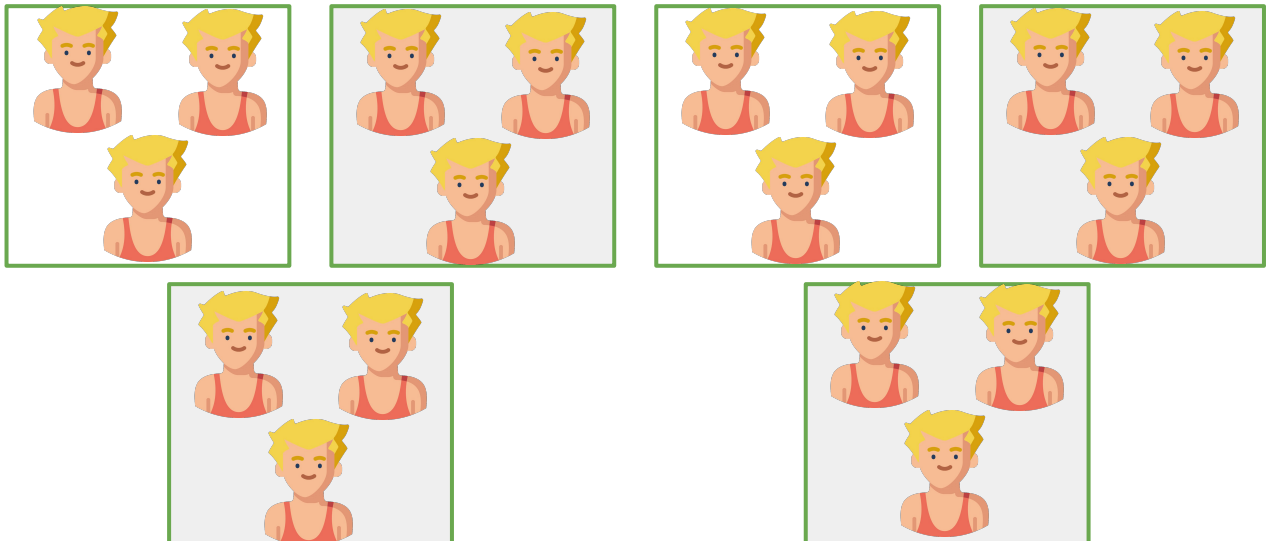
$$4 \times \underline{\quad} = \underline{\quad}$$



$$4 + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

2.

$$3 \times \underline{\quad} = \underline{\quad}$$



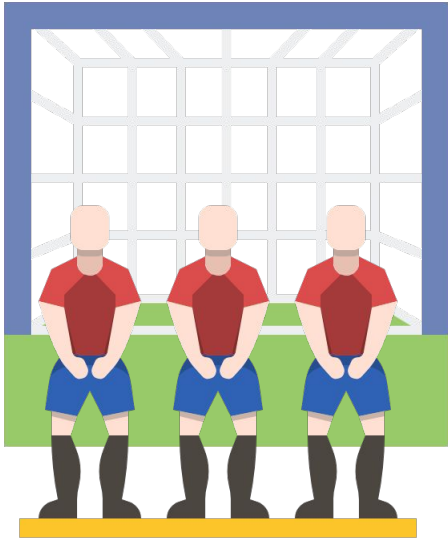
$$3 + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

Understanding Multiplication as Repeated Addition



# GOAL!

Let's see if Manchester Juniors could win the goal! Represent each multiplication and / or repeated addition problem by drawing an array of football.



5.  $3 \times 4 = \underline{\quad}$



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



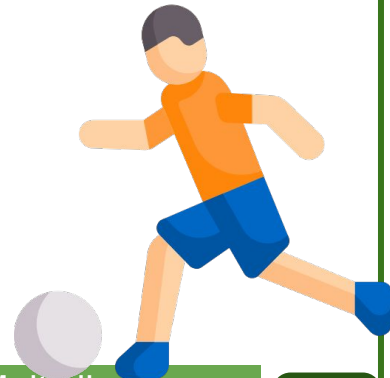
3.  $1 \times 8 = \underline{\quad}$



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



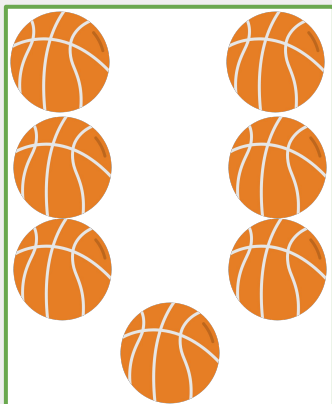
1.  $6 \times 4 = \underline{\quad}$



# SHOOT THAT BALL

The Lakers juniors are having their practice game. Complete the illustration and answer the question that follows.

Lebron is part of the basketball practice. He has 5 bags of basketball. If he puts 7 basketballs in each bag, how many basketballs will there be in total?



**Multiplication Sentence:**



# THE CYCLE RACE

Here comes the cyclists! Choose the correct multiplication and repeated addition sentence for each given. Color the correct multiplication sentence green and violet for the correct repeated addition.

1.

$$3 + 3 + 3 = 9$$

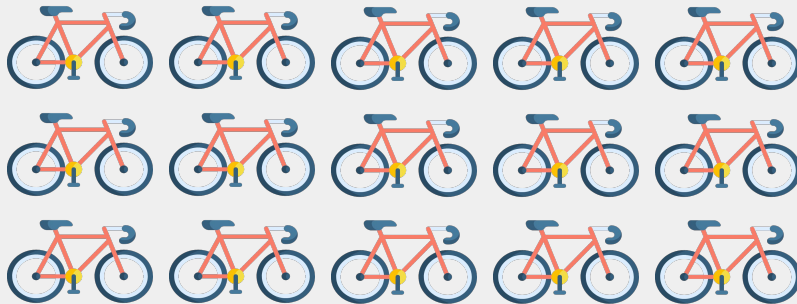
$$3 \times 9 = 27$$

$$3 + 3 + 3 = 6$$

$$3 \times 3 = 9$$



2.



$$3 + 3 + 3 + 3 + 3 = 18$$

$$3 \times 3 = 15$$

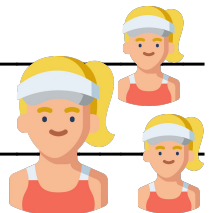
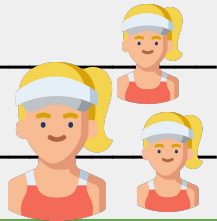
$$5 + 5 + 5 = 15$$

$$5 \times 3 = 15$$



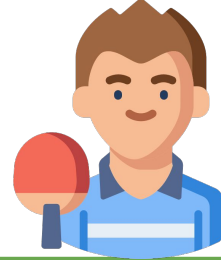
# TIME OUT!

Coach O. calls time out for his volleyball girls! Provide your own multiplication and repeated addition sentence. Write it on the space provided.



# THE OLYMPIC JOURNEY

John is a table tennis player. He now writes what he learned in the Olympics. Simply answer the questions below.



Is the topic about multiplication as repeated addition easy, average, or difficult for you to understand? Why?

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Do you agree that multiplication is indeed a repeated addition? Simply explain your thought.

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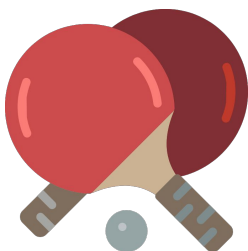
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# ANSWER GUIDE

## Activity 1

1. 5
2. 3
3. 5
4. 3

## Activity 2

1.  $4 + 4 + 4 + 4 = 16$
2.  $8 + 8 + 8 + 8 = 32$

## Activity 3

1. 24
2. 16
3. 15

## Activity 4

1.  $8 + 8 + 8 + 8 + 8 = 40$ ;  $8 \times 5 = 40$
2.  $3 + 3 + 3 + 3 + 3 + 3 = 18$ ;  $3 \times 6 = 18$
3.  $4 + 4 + 4 + 4 + 4 + 4 = 24$ ;  $4 \times 6 = 24$

## Activity 5

1.  $4 + 4 + 4 = 16$ ;  $4 = 16$
2.  $3 + 3 + 3 + 3 + 3 = 18$ ;  $6 = 18$





# ANSWER GUIDE

## Activity 6

1.  $24 = 6 + 6 + 6 + 6$
2.  $21 = 7 + 7 + 7$
3.  $8 = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$
4.  $16 = 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2$
5.  $12 = 3 + 3 + 3 + 3$

## Activity 7

1.  $7 \times 5 = 35$

## Activity 8

1.  $3 + 3 + 3 = 9$ ;  $3 \times 3 = 9$
2.  $5 + 5 + 5 = 15$ ;  $5 \times 3 = 15$

## Activity 9

The answers may vary as the activity is subjective.

## Activity 10

The answers may vary as the activity is subjective.



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