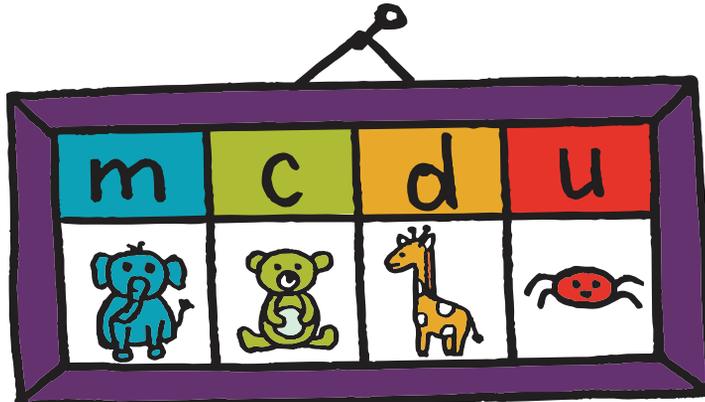


Stéphanie Eleaume-Lachaud
Illustrations Filf

MON KIT ENSEIGNANT



MATHS - CYCLE 2



NOTE AUX ENSEIGNANTS

Chers enseignants,

Voici votre **cahier de ressources de MATHS - cycle 2.**

N'hésitez pas à nous transmettre par email contact@mescartesmentales.fr vos idées de manipulation et autres expériences pratiques faites dans vos classes.

Nous pourrions alors réaliser de nouvelles ressources, mettre à jour ce cahier et vous le renvoyer régulièrement.

Bonne utilisation !
Stéphanie & Maud



LES AUTEURS



Stéphanie



Filf

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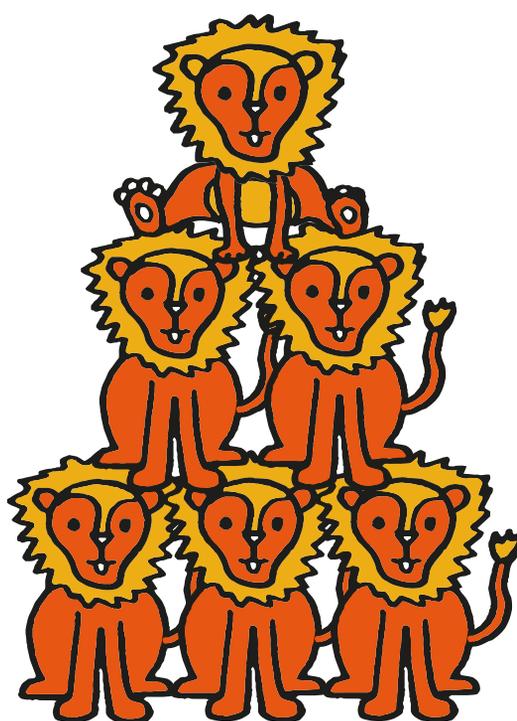
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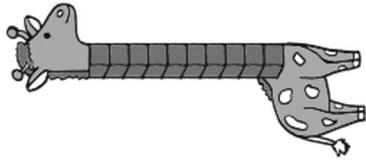
LES NOMBRES

PARTIE 1

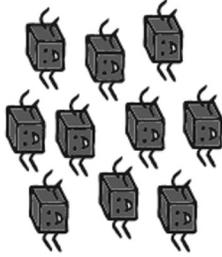


LES RÈGLES D'ÉCHANGE

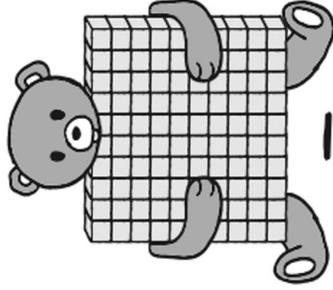
1 dizaine
10 unités



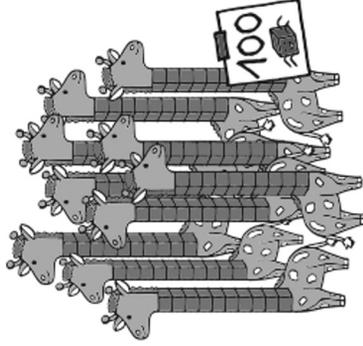
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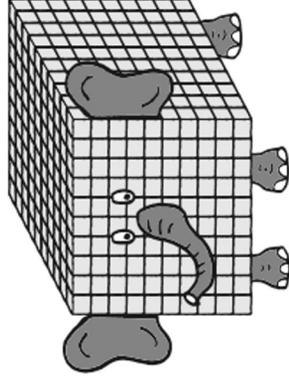
1 centaine
10 dizaines



=



1 millier
10 centaines



=

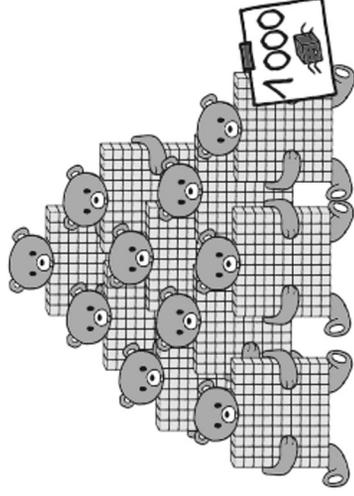
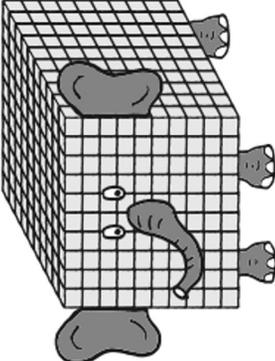
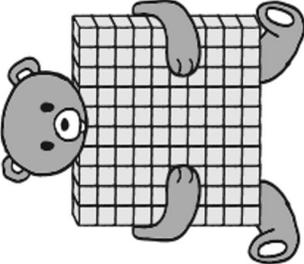
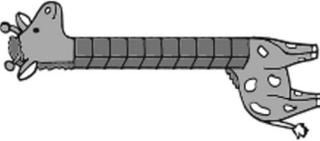
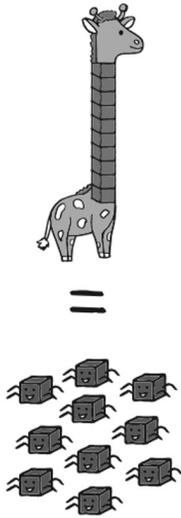


TABLEAU DE NUMÉRATION

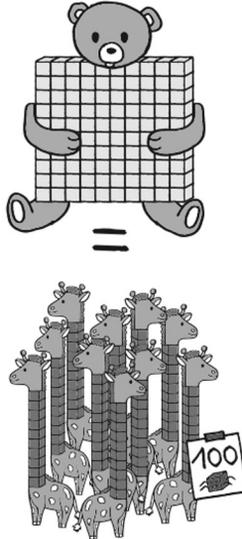
m milliers	c centaines	d dizaines	u unités
			

LES RÈGLES D'ÉCHANGE

1 dizaine
= 10 unités



1 centaine
= 10 dizaines



1 millier
= 10 centaines

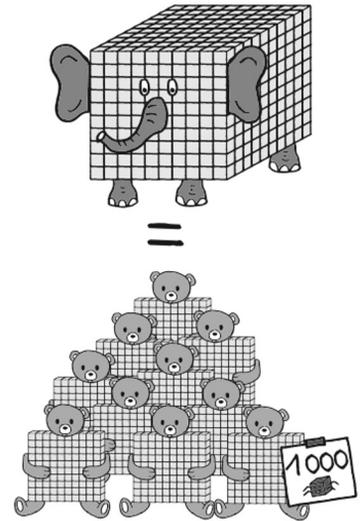
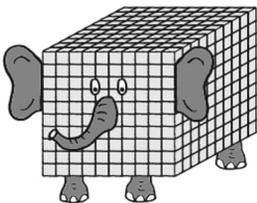
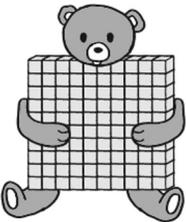
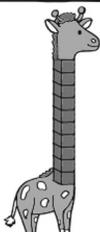
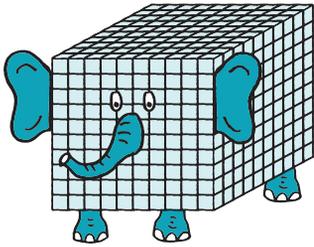


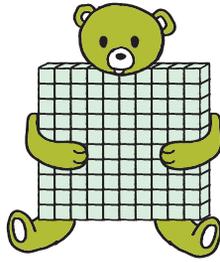
TABLEAU DE NUMÉRATION

m milliers	c centaines	d dizaines	u unités
			

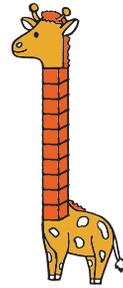
milliers (m)



centaines (c)



dizaines (d)



unités (u)



LE CHAPITEAU
DES NOMBRES

LES NOMBRES
JUSQU'À 100

0	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

COMPARER DEUX NOMBRES

PLUS PETIT QUE

23 < 78



ÉGAL À

8 = 8

★ ASTUCE!
Le croco
croque
toujours
le + grand!



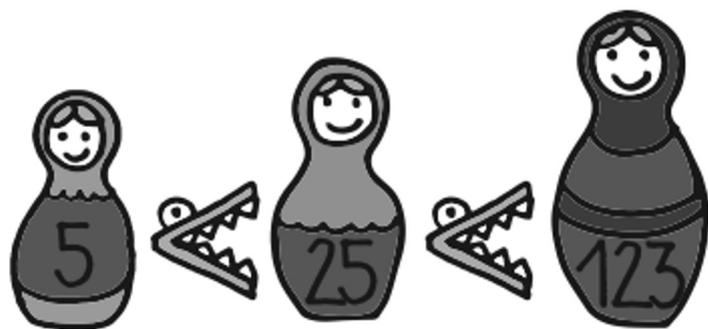
PLUS GRAND QUE

45 > 16



RANGER LES NOMBRES

DU PLUS PETIT AU PLUS GRAND

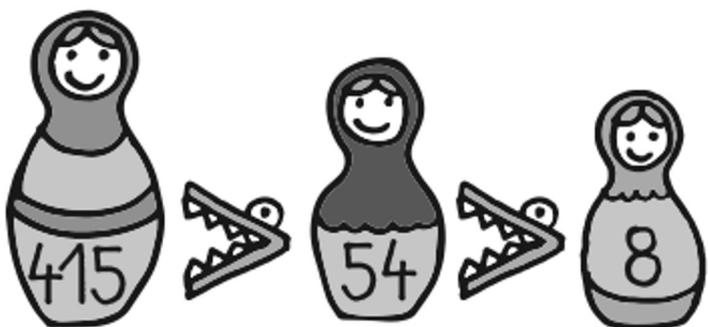


Ordre croissant

Tu es en pleine
CROISSANCE!



DU PLUS GRAND AU PLUS PETIT



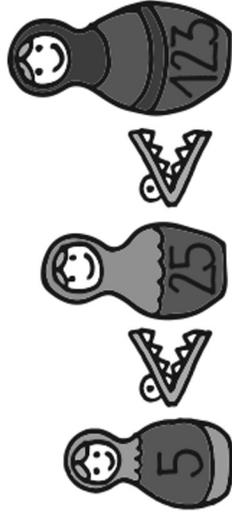
Ordre décroissant

DESCENDRE!



RANGER LES NOMBRES

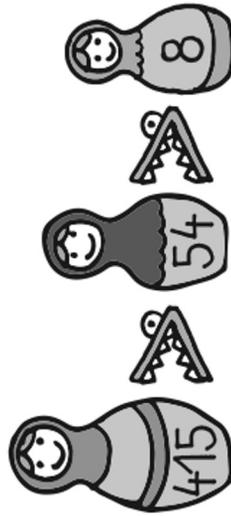
DU PLUS PETIT AU PLUS GRAND



Ordre croissant



DU PLUS GRAND AU PLUS PETIT



Ordre décroissant



COMPARER DEUX NOMBRES

PLUS PETIT QUE

23



78



ÉGAL À

8



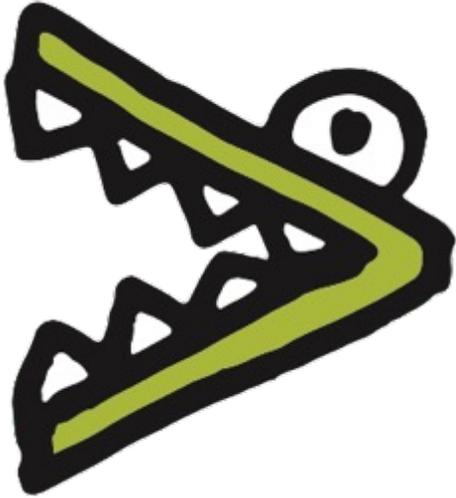
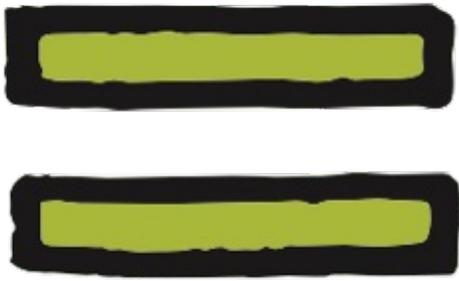
8

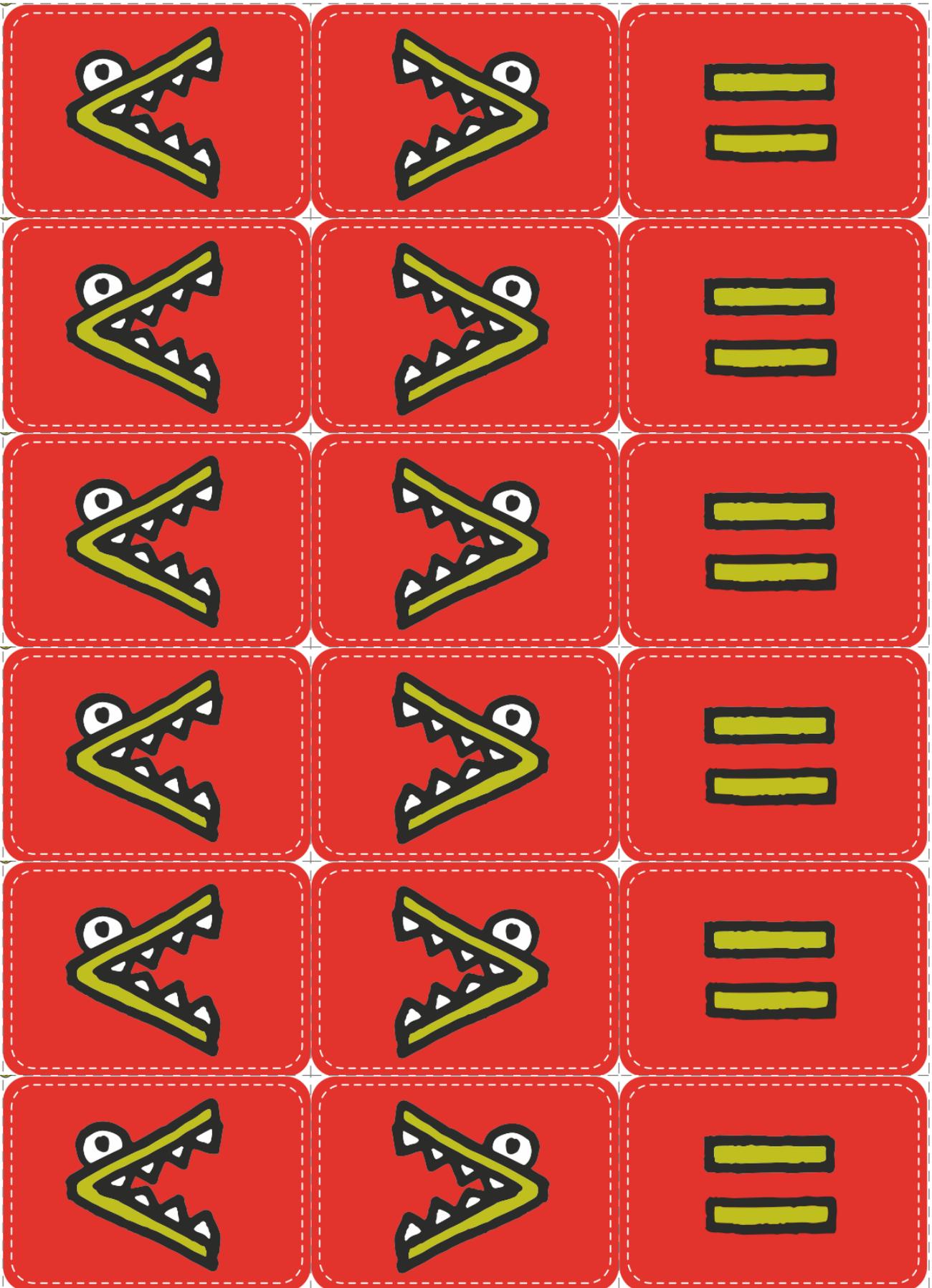
PLUS GRAND QUE

45

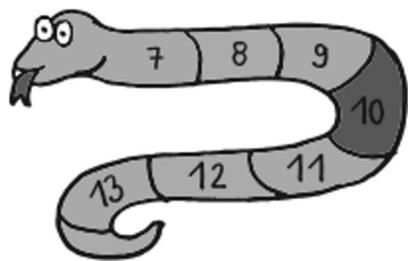


16





LE NOMBRE 10



$1 + 9$

$2 + 8$

$3 + 7$

$4 + 6$

$5 + 5$

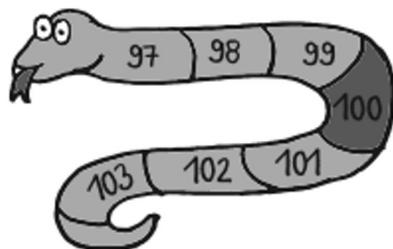
10

			
m	c	d	u
		1	0

1 dizaine 

10 unités 

LE NOMBRE 100



$10 + 90$

$20 + 80$

$30 + 70$

$40 + 60$

$50 + 50$

100

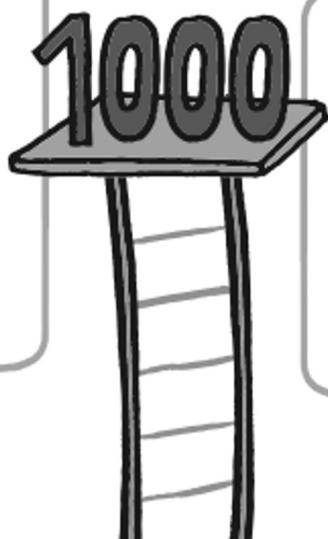
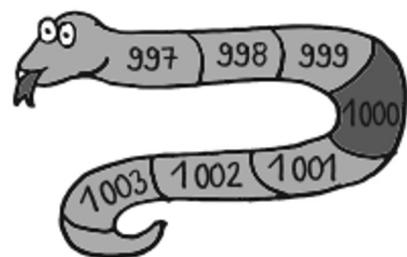
			
m	c	d	u
	1	0	0

1 centaine 

10 dizaines 

100 unités 

LE NOMBRE 1 000

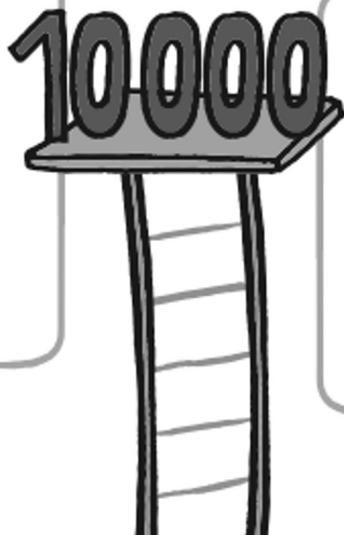
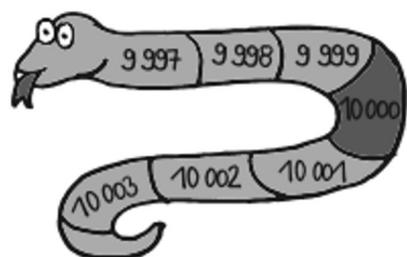


			
m	c	d	u
1	0	0	0

$100 + 900$
 $200 + 800$
 $300 + 700$
 $400 + 600$
 $500 + 500$

1 millier 
10 centaines 
100 dizaines 
1 000 unités 

LE NOMBRE 10 000

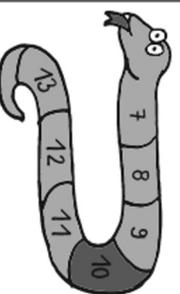


				
	m	c	d	u
1	0	0	0	0

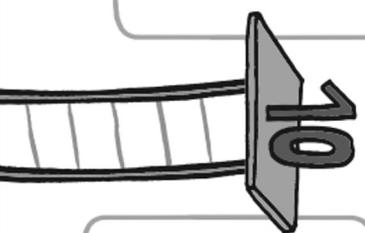
$1 000 + 9 000$
 $2 000 + 8 000$
 $3 000 + 7 000$
 $4 000 + 6 000$
 $5 000 + 5 000$

10 milliers 
100 centaines 
1 000 dizaines 
10 000 unités 

LE NOMBRE 10



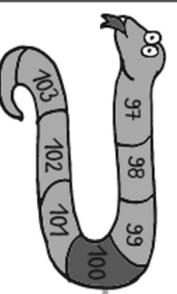
$$\begin{array}{l} 1 + 9 \\ 2 + 8 \\ 3 + 7 \\ 4 + 6 \\ 5 + 5 \end{array}$$



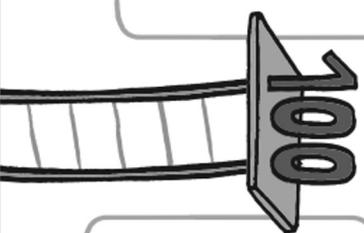
m	100	10	1	0
c	10	1	0	0
d	1	0	0	0
u	0	0	0	0

1 dizaine
10 unités

LE NOMBRE 100



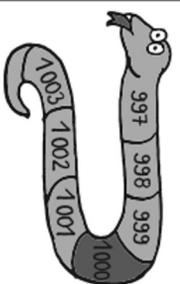
$$\begin{array}{l} 10 + 90 \\ 20 + 80 \\ 30 + 70 \\ 40 + 60 \\ 50 + 50 \end{array}$$



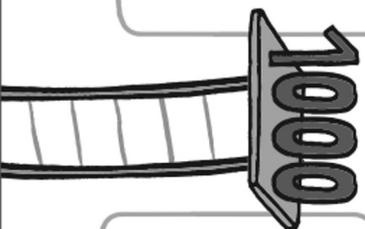
m	100	10	1	0	0
c	10	1	0	0	0
d	1	0	0	0	0
u	0	0	0	0	0

1 centaine
10 dizaines
100 unités

LE NOMBRE 1 000



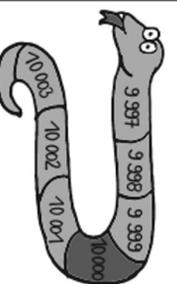
$$\begin{array}{l} 100 + 900 \\ 200 + 800 \\ 300 + 700 \\ 400 + 600 \\ 500 + 500 \end{array}$$



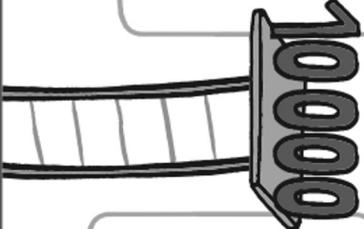
m	1000	100	10	1	0	0	0
c	100	10	1	0	0	0	0
d	10	1	0	0	0	0	0
u	1	0	0	0	0	0	0

1 millier
10 centaines
100 dizaines
1 000 unités

LE NOMBRE 10 000



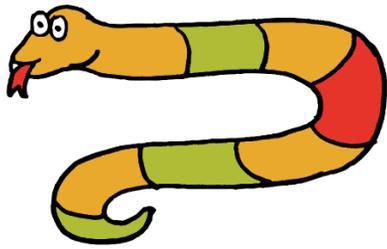
$$\begin{array}{l} 1\ 000 + 9\ 000 \\ 2\ 000 + 8\ 000 \\ 3\ 000 + 7\ 000 \\ 4\ 000 + 6\ 000 \\ 5\ 000 + 5\ 000 \end{array}$$



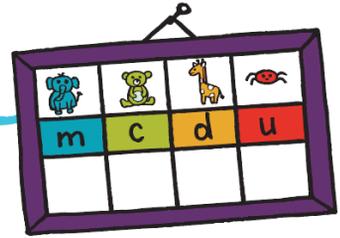
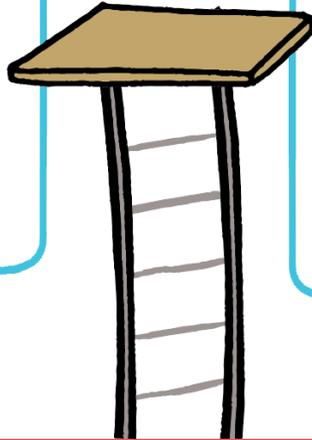
m	10000	1000	100	10	1	0	0	0	0
c	1000	100	10	1	0	0	0	0	0
d	100	10	1	0	0	0	0	0	0
u	10	1	0	0	0	0	0	0	0

10 milliers
100 centaines
1 000 dizaines
10 000 unités

LE NOMBRE



Four horizontal blue lines for writing.



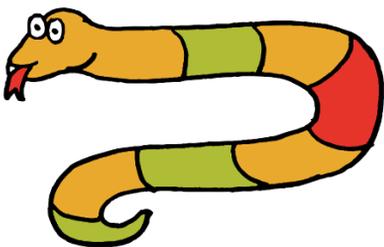
milliers 

centaines 

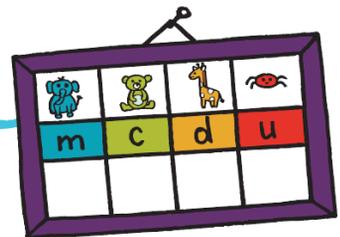
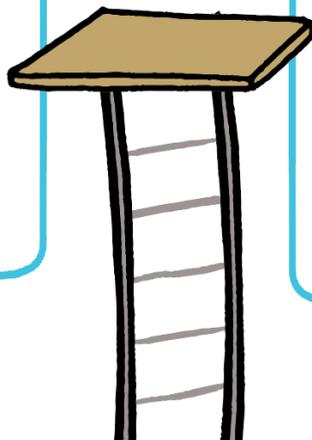
dizaines 

unités 

LE NOMBRE



Four horizontal blue lines for writing.

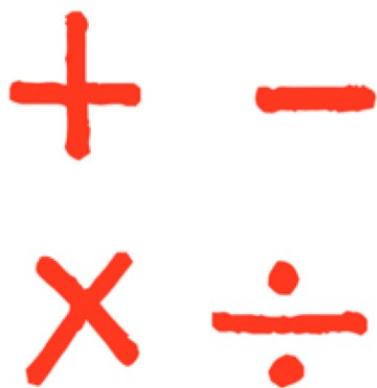


milliers 

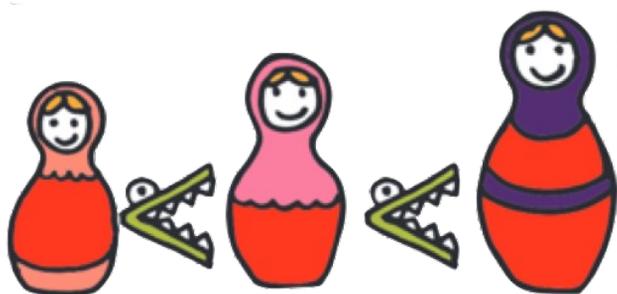
centaines 

dizaines 

unités 



CALCULER



ENCADRER



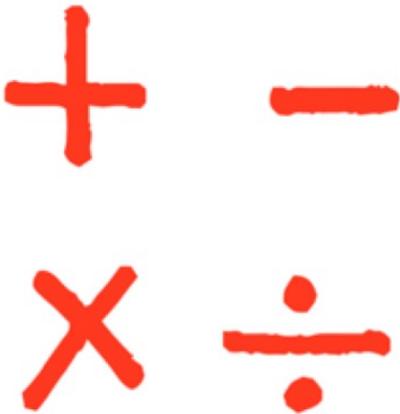
COMPARER



RANGER

Carte action à manipuler pour identifier une consigne.

CALCULER



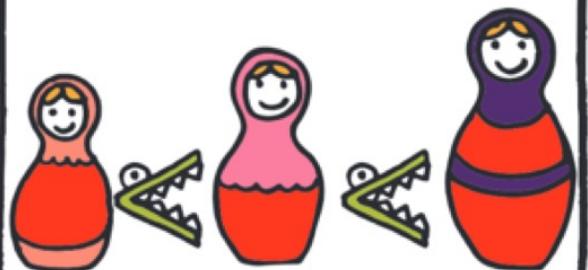
COMPARER



RANGER

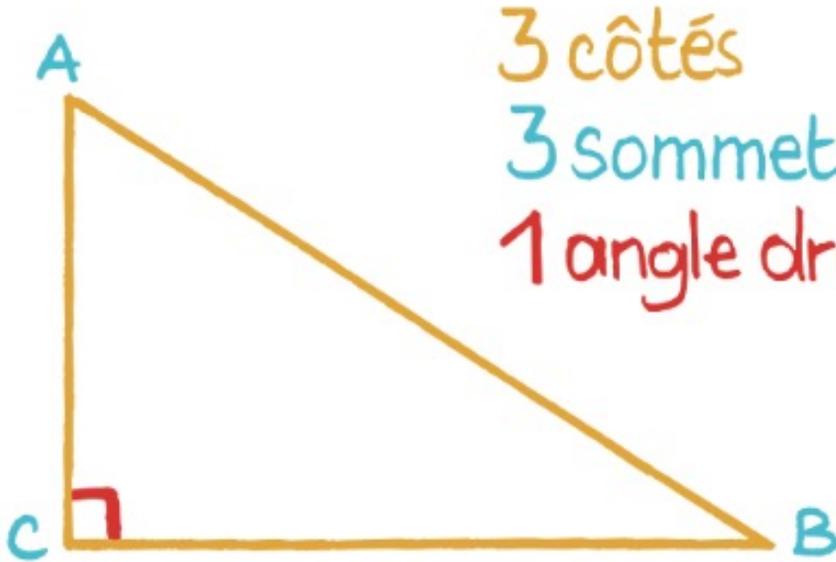


ENCADRER



GÉOMÉTRIE

PARTIE 2



3 côtés
3 sommets
1 angle droit

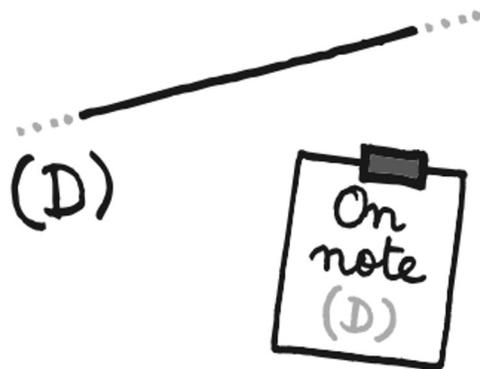


VOCABULAIRE DE GÉOMÉTRIE

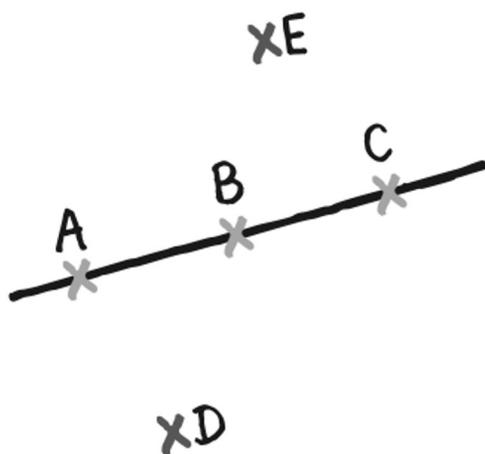
UN POINT



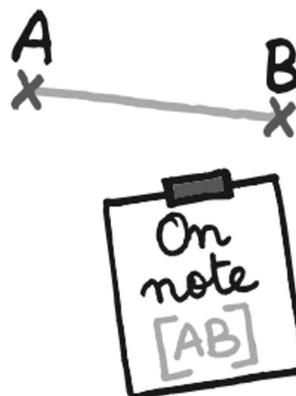
UNE DROITE



DES POINTS ALIGNÉS



UN SEGMENT



VOCABULAIRE DE GÉOMÉTRIE

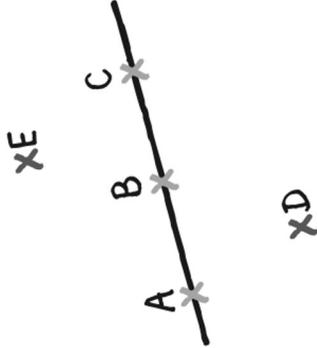
UN POINT

A
x

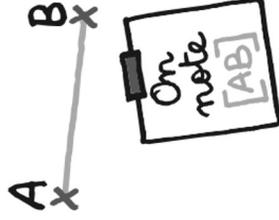
UNE DROITE



DES POINTS ALIGNÉS



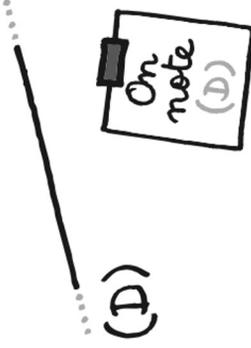
UN SEGMENT



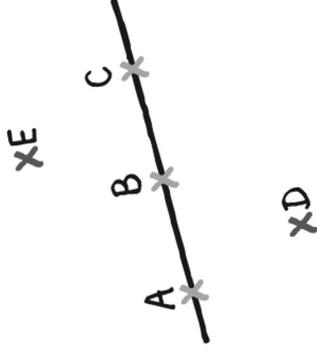
UN POINT

A
x

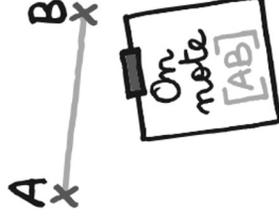
UNE DROITE

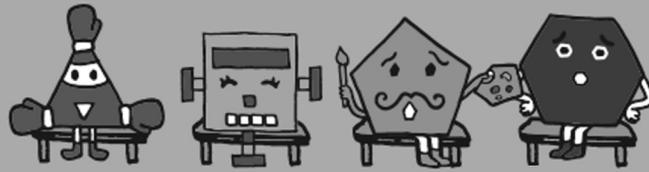


DES POINTS ALIGNÉS



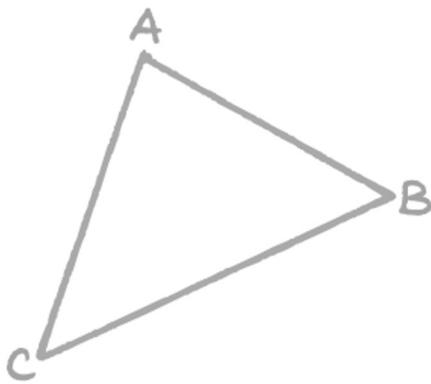
UN SEGMENT





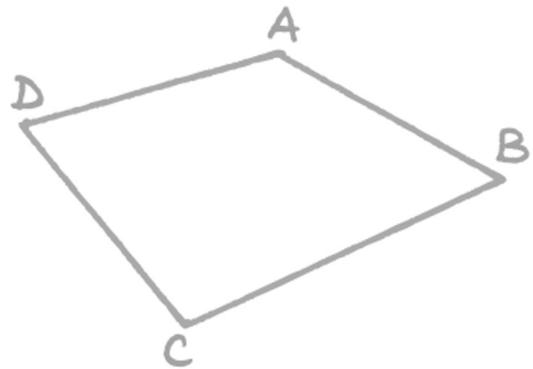
LES POLYGONES

TRIANGLE



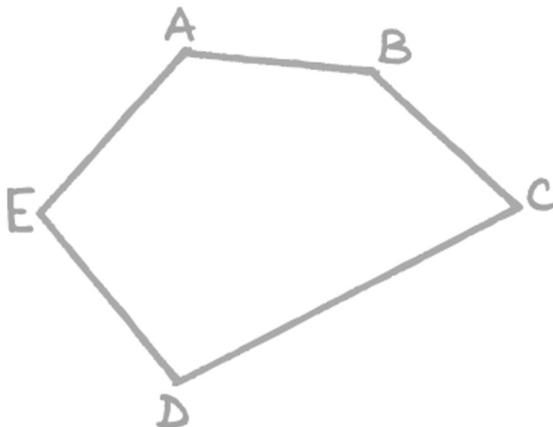
3 côtés / 3 sommets

QUADRILATÈRE



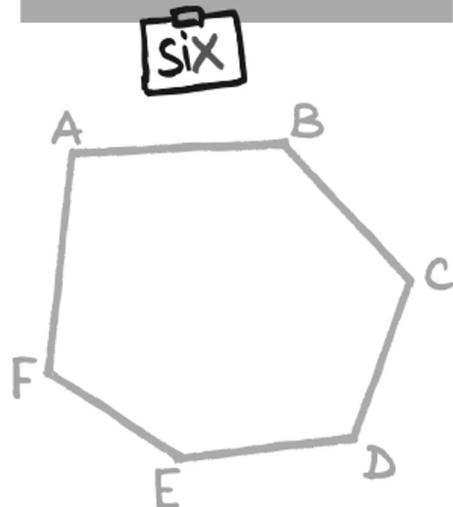
4 côtés / 4 sommets

PENTAGONE



5 côtés / 5 sommets

HEXAGONE

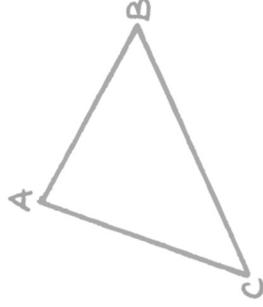


6 côtés / 6 sommets



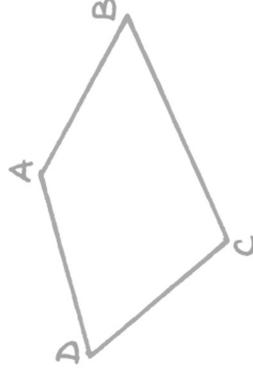
LES POLYGONES

TRIANGLE



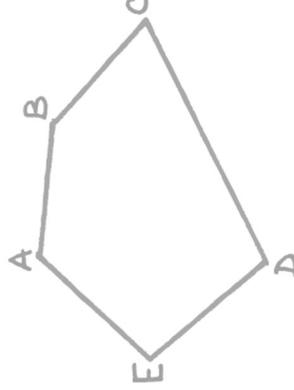
3 côtés / 3 sommets

QUADRILATÈRE



4 côtés / 4 sommets

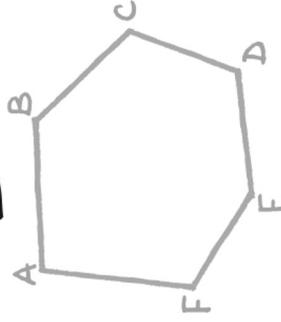
PENTAGONE



5 côtés / 5 sommets

HEXAGONE

SIX

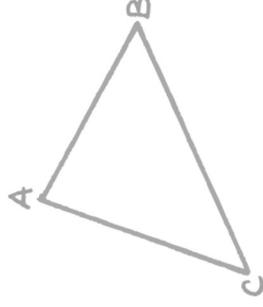


6 côtés / 6 sommets



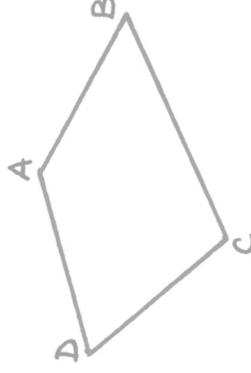
LES POLYGONES

TRIANGLE



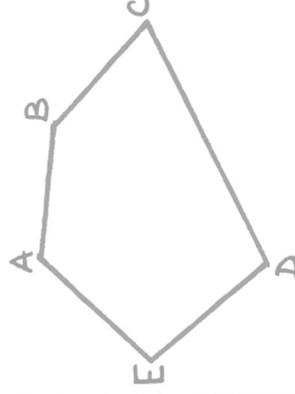
3 côtés / 3 sommets

QUADRILATÈRE



4 côtés / 4 sommets

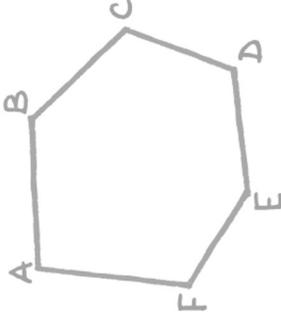
PENTAGONE



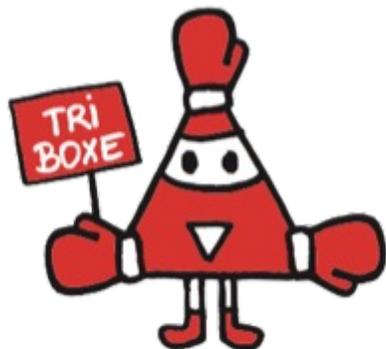
5 côtés / 5 sommets

HEXAGONE

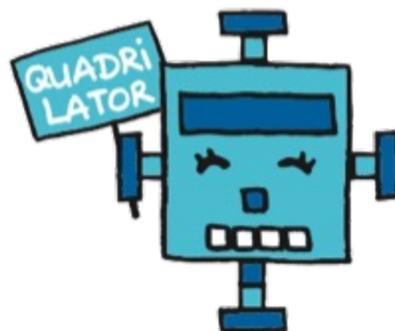
SIX



6 côtés / 6 sommets



3 côtés / 3 sommets



4 côtés / 4 sommets



5 côtés / 5 sommets



6 côtés / 6 sommets

TRIANGLE

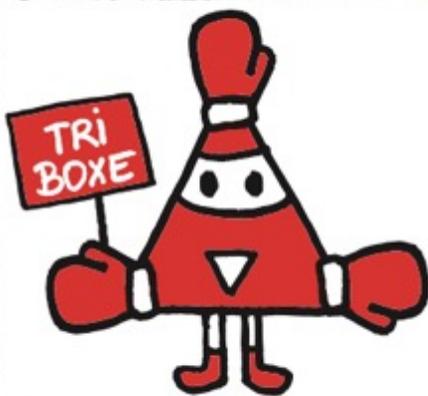
QUADRILATÈRE

PENTAGONE

HEXAGONE

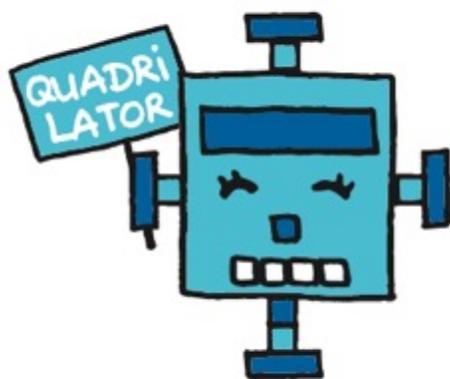


TRIANGLE



3 côtés / 3 sommets

QUADRILATÈRE



4 côtés / 4 sommets

PENTAGONE



5 côtés / 5 sommets

HEXAGONE



6 côtés / 6 sommets

HEPTAGONE

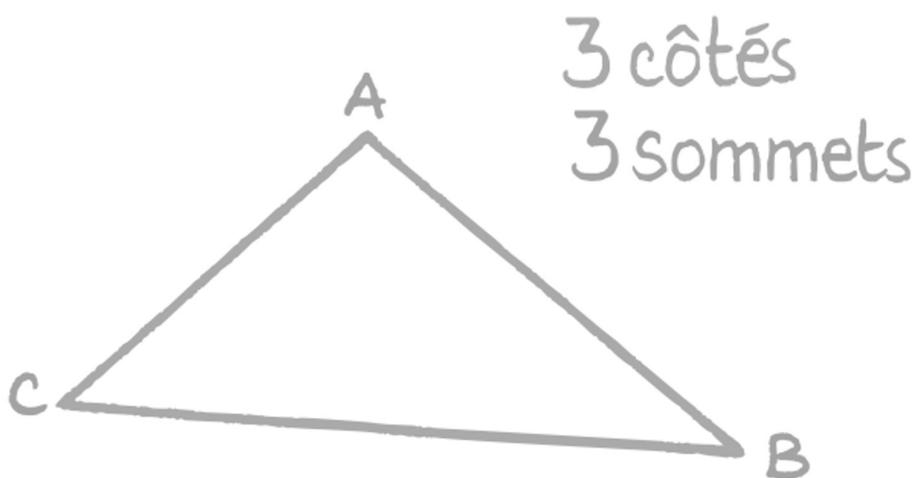


7 côtés / 7 sommets

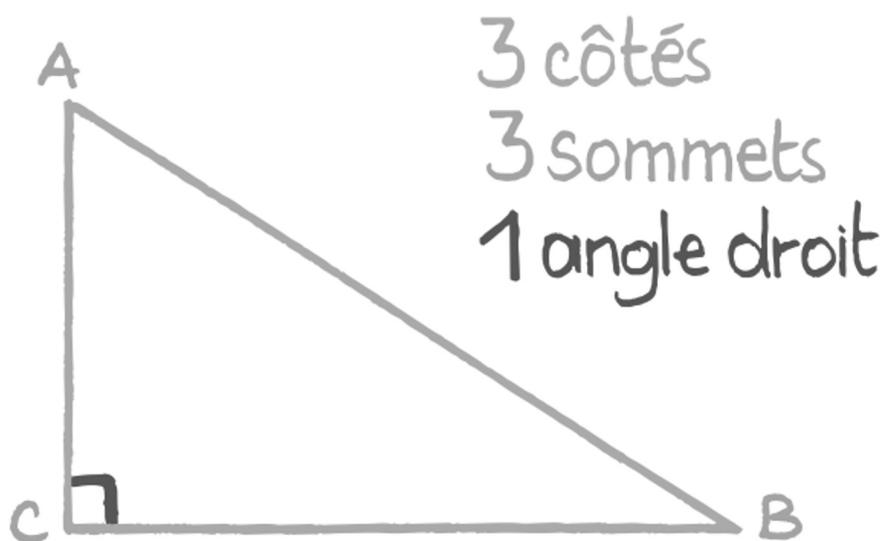
côtés / sommets

LES TRIANGLES

TRIANGLE QUELCONQUE



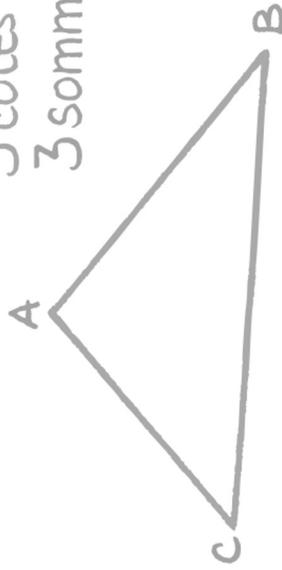
TRIANGLE RECTANGLE



LES TRIANGLES

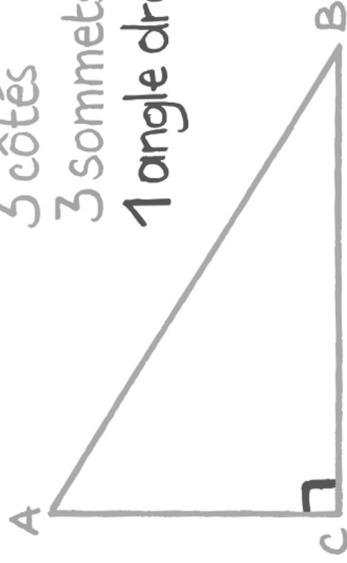
TRIANGLE QUELCONQUE

3 côtés
3 sommets



TRIANGLE RECTANGLE

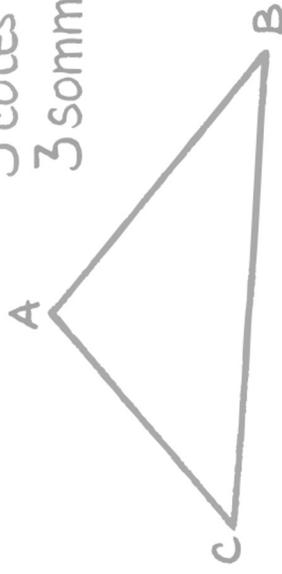
3 côtés
3 sommets
1 angle droit



LES TRIANGLES

TRIANGLE QUELCONQUE

3 côtés
3 sommets



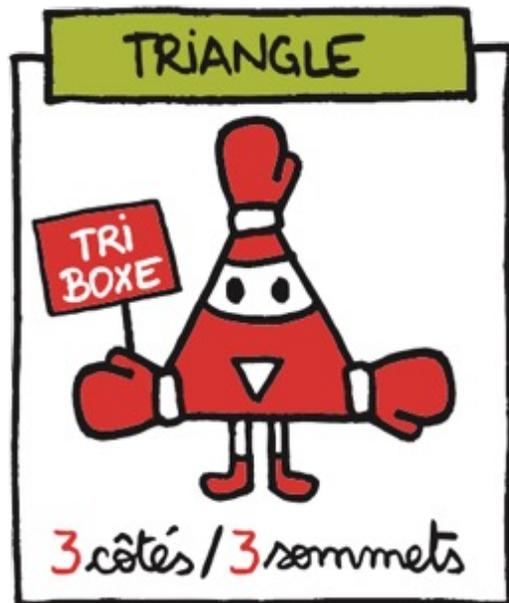
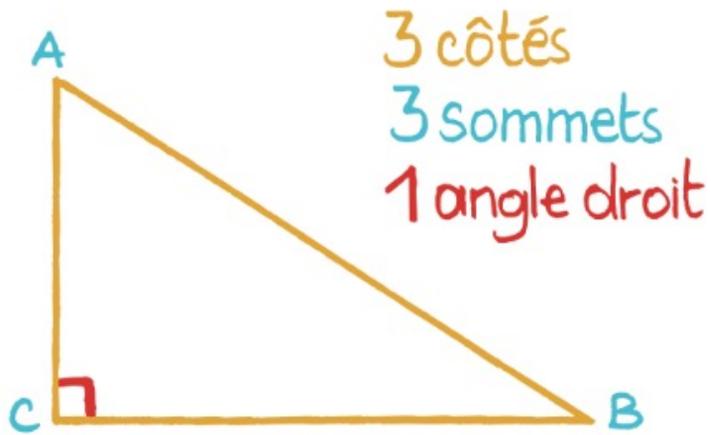
TRIANGLE RECTANGLE

3 côtés
3 sommets
1 angle droit



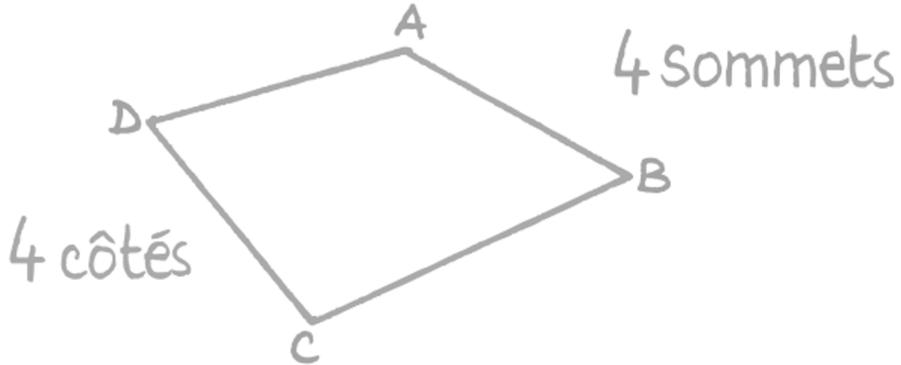
Vocabulaire

Triangle rectangle

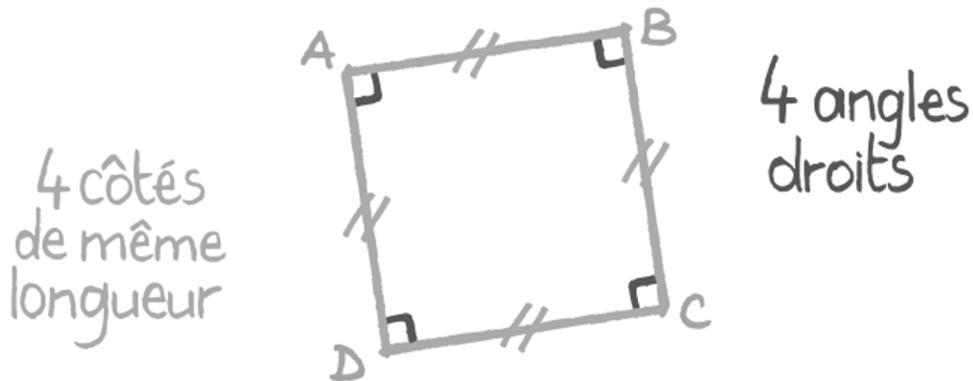


LES QUADRILATÈRES

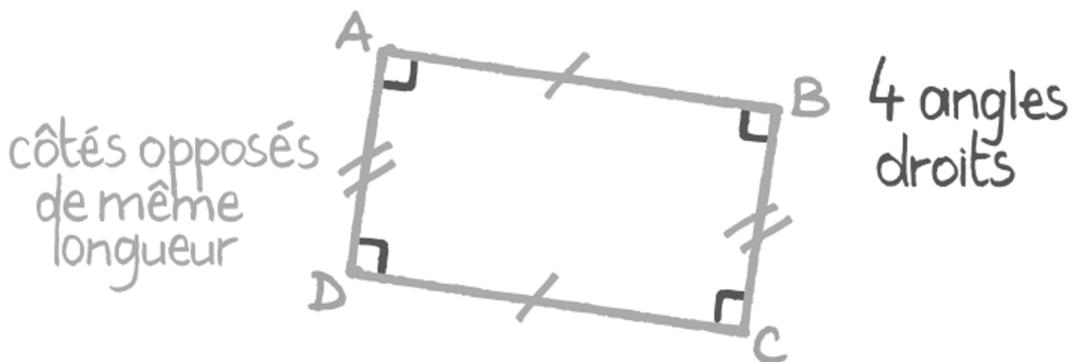
QUELCONQUES



CARRÉ

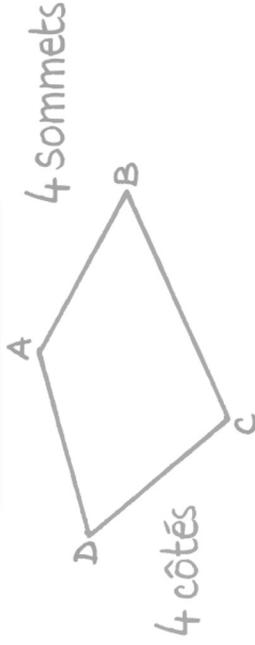


RECTANGLE

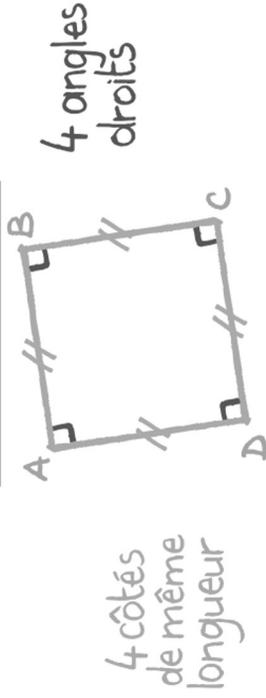


LES QUADRILATÈRES

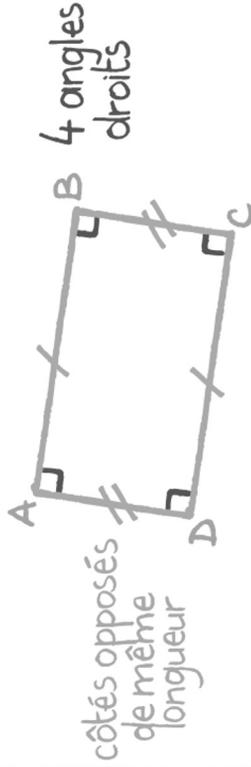
QUELCONQUES



CARRÉ

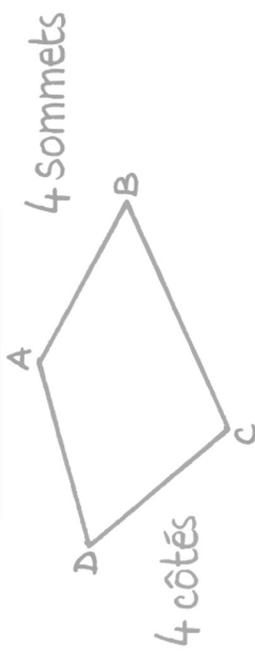


RECTANGLE

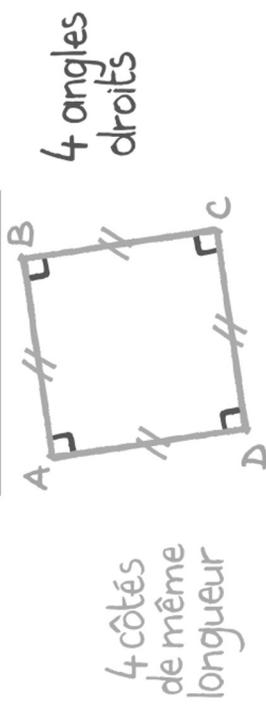


LES QUADRILATÈRES

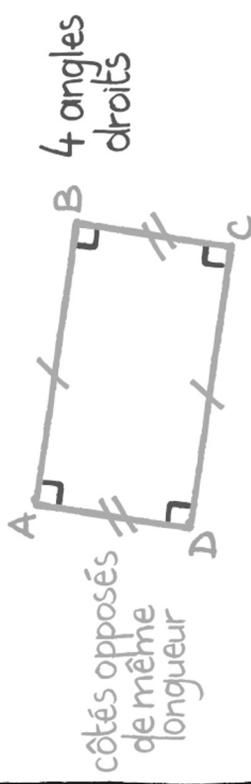
QUELCONQUES



CARRÉ



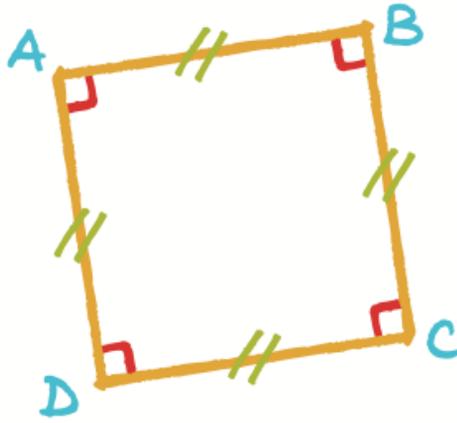
RECTANGLE



Vocabulaire

Carré

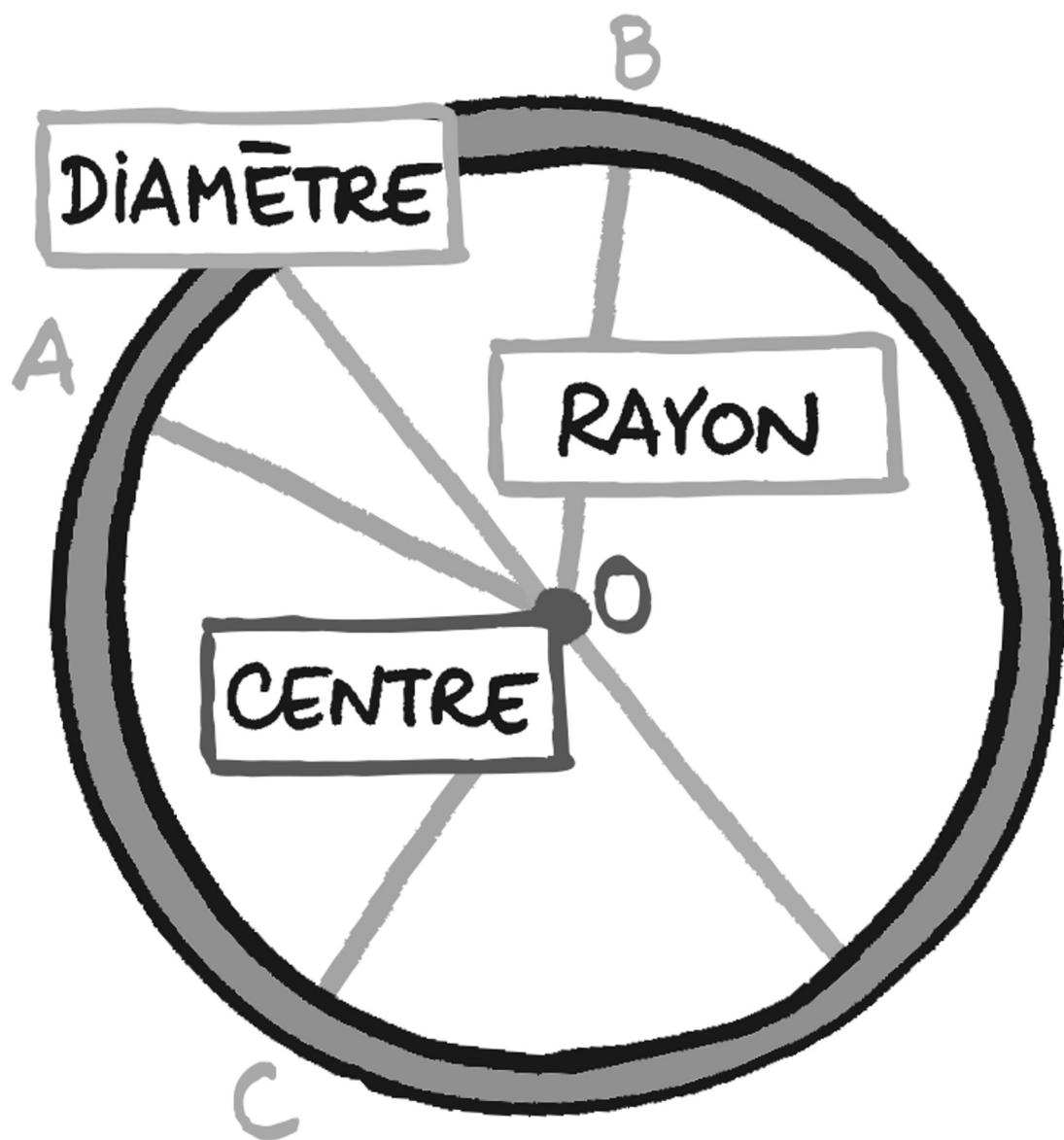
4 côtés
de même
longueur



4 angles
droits

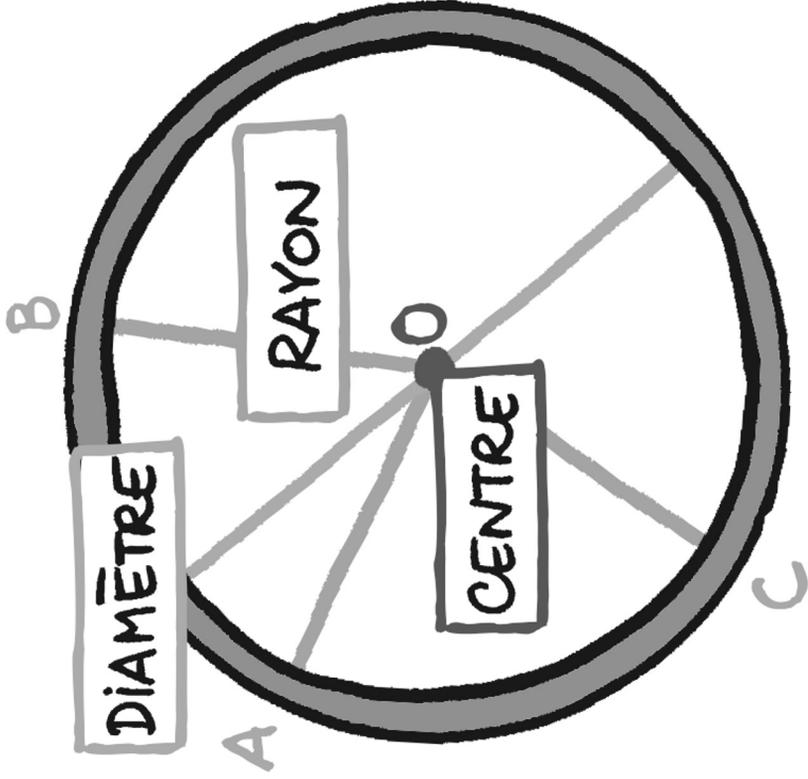


LE CERCLE



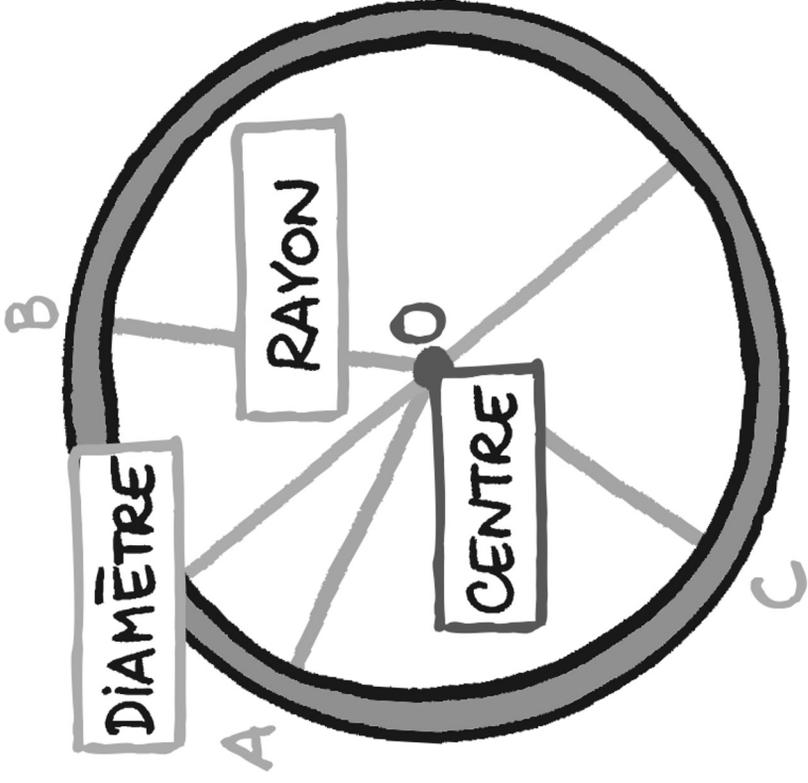
$$OA = OB = OC$$
$$\text{DIAMÈTRE} = 2 \text{ rayons}$$

LE CERCLE



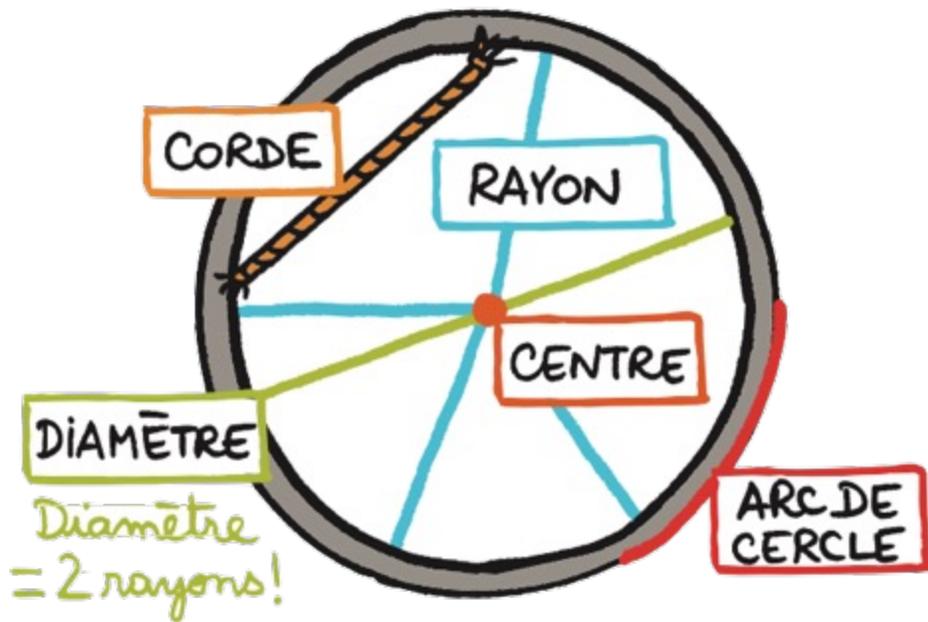
$OA = OB = OC$
DIAMÈTRE = 2 rayons

LE CERCLE



$OA = OB = OC$
DIAMÈTRE = 2 rayons

Vocabulaire



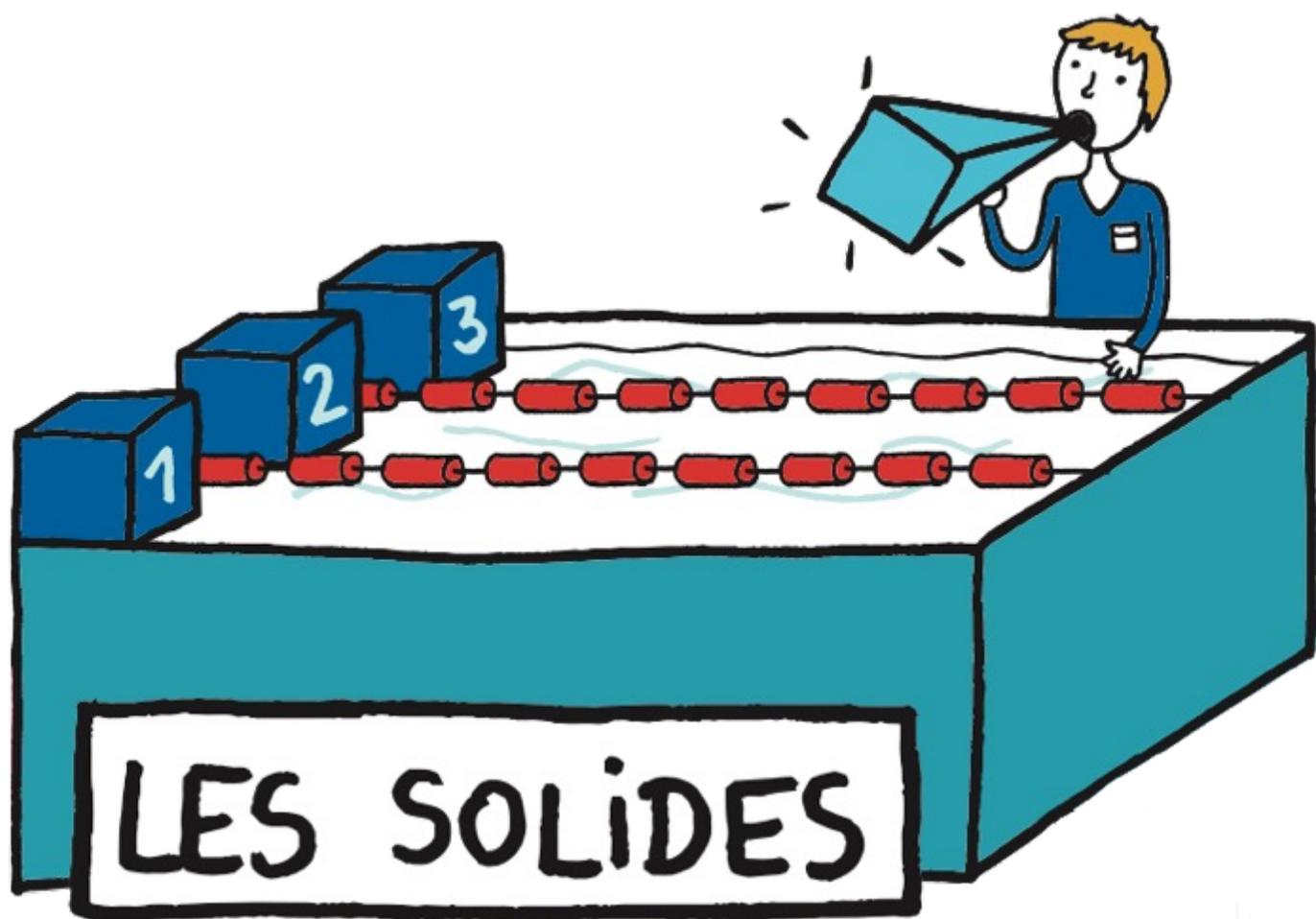
Vocabulaire



Cercle **ENTIER**

DEMI-cercle

QUART de cercle



Vocabulaire

Arête

Sommet

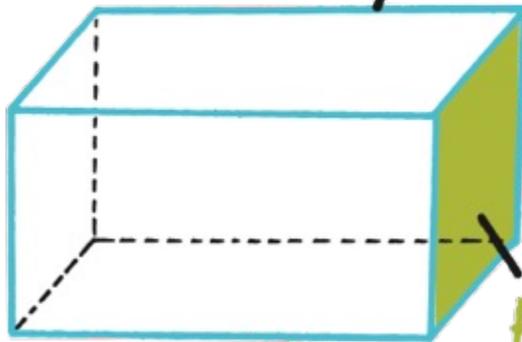
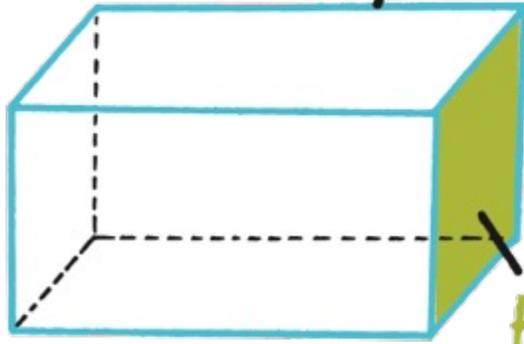
Face

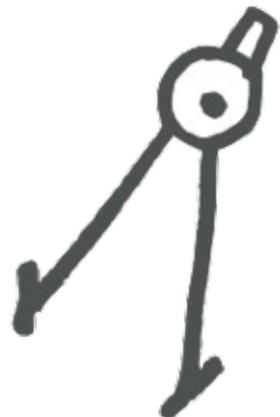
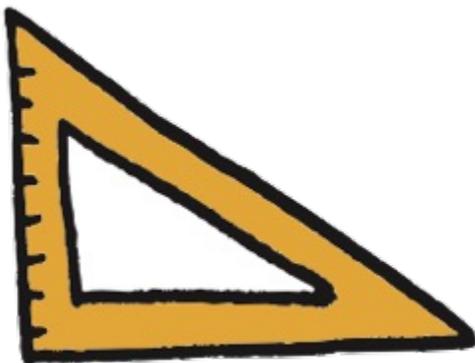
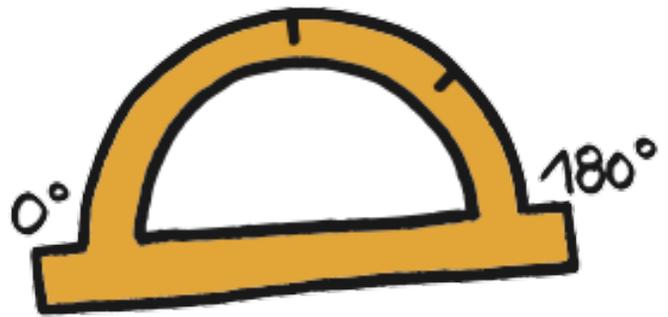
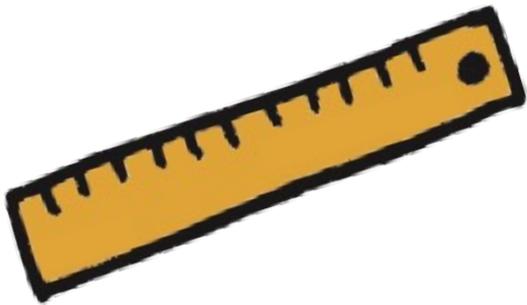
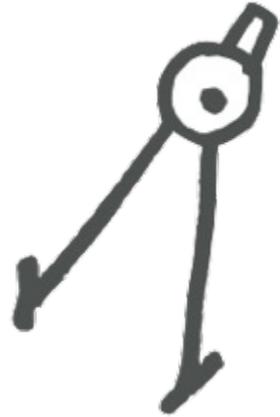
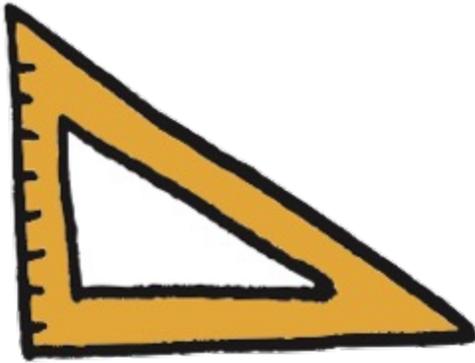
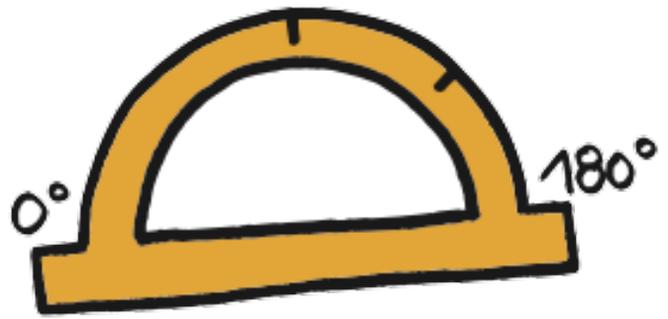
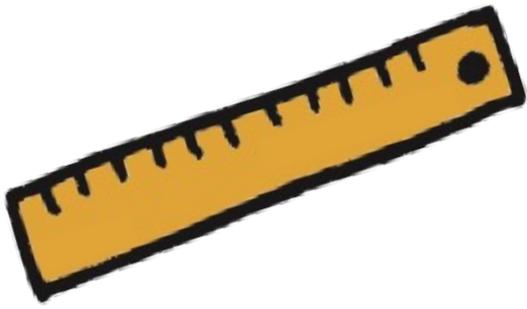
Vocabulaire

Arête

Sommet

Face





LES MESURES

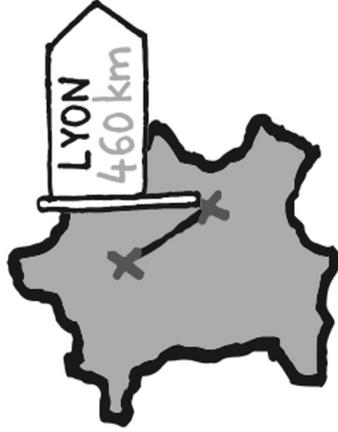
PARTIE 3



LA LONGUEUR

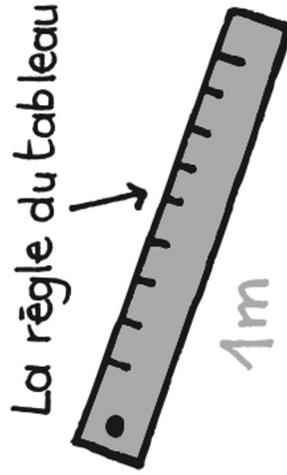
KILOMÈTRE

$$1 \text{ km} = 1000 \text{ m}$$



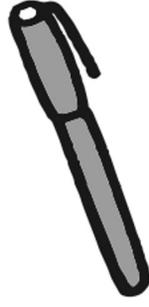
MÈTRE

$$1 \text{ m} = 100 \text{ cm}$$



CENTIMÈTRE

$$1 \text{ cm} = 10 \text{ mm}$$



20 cm

km	hm	dam	m	dm	cm	mm
----	----	-----	---	----	----	----

Tableau de conversion →

LA LONGUEUR

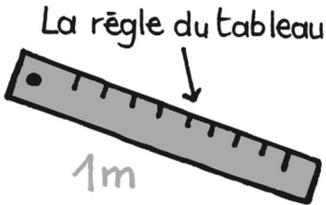
KILOMÈTRE

$$1 \text{ km} = 1000 \text{ m}$$



MÈTRE

$$1 \text{ m} = 100 \text{ cm}$$



CENTIMÈTRE

$$1 \text{ cm} = 10 \text{ mm}$$

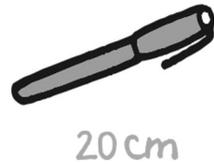


Tableau de conversion →

km	hm	dam	m	dm	cm	mm

LA LONGUEUR

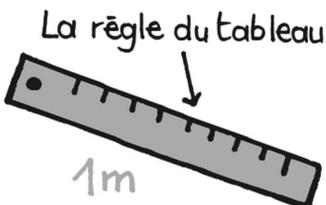
KILOMÈTRE

$$1 \text{ km} = 1000 \text{ m}$$



MÈTRE

$$1 \text{ m} = 100 \text{ cm}$$



CENTIMÈTRE

$$1 \text{ cm} = 10 \text{ mm}$$

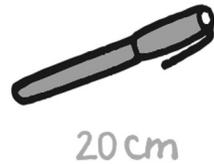
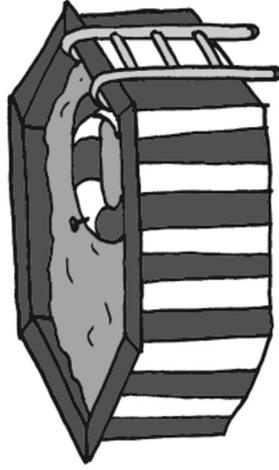


Tableau de conversion →

km	hm	dam	m	dm	cm	mm

LA CONTENANCE

HECTOLITRE



10 hl

LITRE



1 l

CENTILITRE



25 cl

hl	dal	l	dl	cl	ml

Tableau de conversion →

LA CONTENANCE

HECTOLITRE

$$1 \text{ hl} = 100 \text{ l}$$



10 hl

LITRE

$$1 \text{ l} = 100 \text{ cl}$$



1 l

CENTILITRE

$$1 \text{ cl} = 10 \text{ ml}$$



25 cl

Tableau de conversion →

hl	dal	l	dl	cl	ml

LA CONTENANCE

HECTOLITRE

$$1 \text{ hl} = 100 \text{ l}$$



10 hl

LITRE

$$1 \text{ l} = 100 \text{ cl}$$



1 l

CENTILITRE

$$1 \text{ cl} = 10 \text{ ml}$$



25 cl

Tableau de conversion →

hl	dal	l	dl	cl	ml

LA MASSE

TONNE

$$1t = 1000kg$$



5t

KILOGRAMME

$$1kg = 1000g$$



8 kg

GRAMME

$$1g = 1000mg$$



250g

Tableau de conversion

t	q	-	kg	hg	dag	g	dg	cg	mg	
---	---	---	----	----	-----	---	----	----	----	--



mg

cg

dg

g

dag

hg

kg

-

q

t



Tableau de conversion

LA MASSE

TONNE

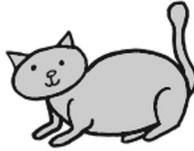
$$1t = 1000kg$$



5t

KILOGRAMME

$$1kg = 1000g$$



8 kg

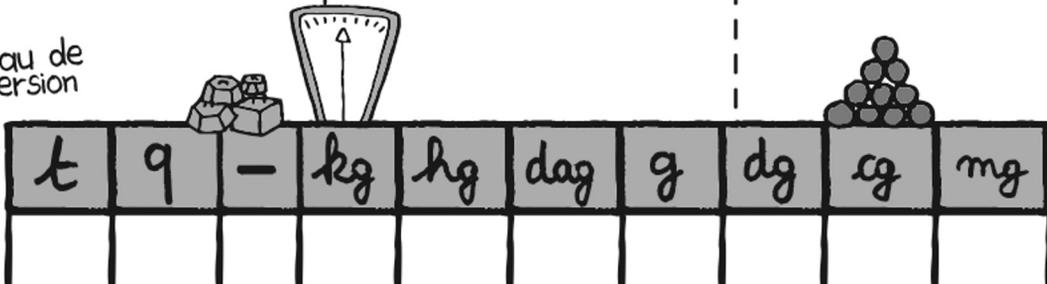
GRAMME

$$1g = 1000mg$$



250g

Tableau de conversion



LA MASSE

TONNE

$$1t = 1000kg$$



5t

KILOGRAMME

$$1kg = 1000g$$



8 kg

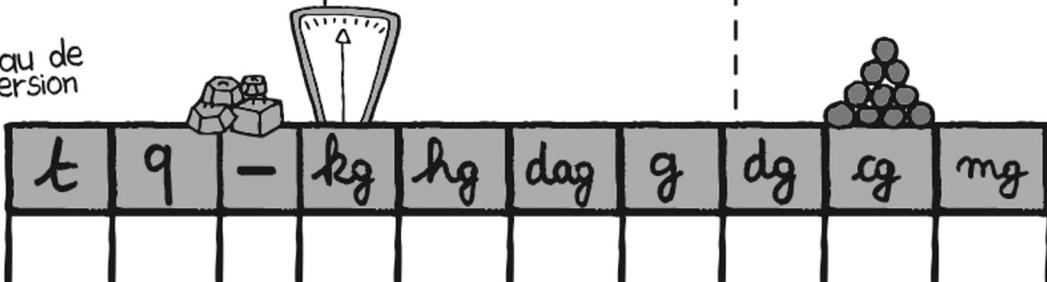
GRAMME

$$1g = 1000mg$$



250g

Tableau de conversion

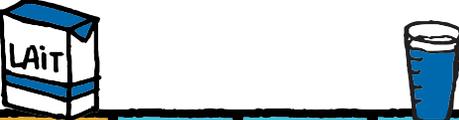




km	hm	dam	m	dm	cm	mm



t	q	-	kg	hg	dag	g	dg	cg	mg



hl	dal	l	dl	cl	ml

LA DURÉE

Sert à exprimer
le temps qui passe.



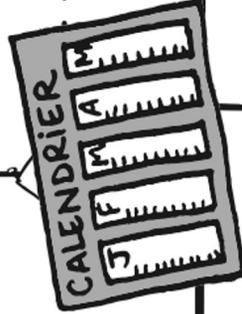
1 Minute
= 60 Secondes



1 Heure
= 60 Minutes



1 Jour
= 24 Heures



1 Semaine
= 7 Jours

1 Mois
= 28-29
30-31 Jours

1 An
= 365 ou 366 Jours

LA DURÉE

Sert à exprimer le temps qui passe.



1 Minute
=
60 Secondes



1 Heure
=
60 Minutes

1 Jour
=
24 Heures



1 Semaine
=
7 Jours

1 Mois
=
28-29
30-31 Jours

1 An
=
365 ou 366 Jours

LA DURÉE

Sert à exprimer le temps qui passe.



1 Minute
=
60 Secondes



1 Heure
=
60 Minutes

1 Jour
=
24 Heures



1 Semaine
=
7 Jours

1 Mois
=
28-29
30-31 Jours

1 An
=
365 ou 366 Jours

1 JOUR

24 HEURES

1 MINUTE

60 SECONDES

1 HEURE

60 MINUTES

1 SEMAINE

7 JOURS

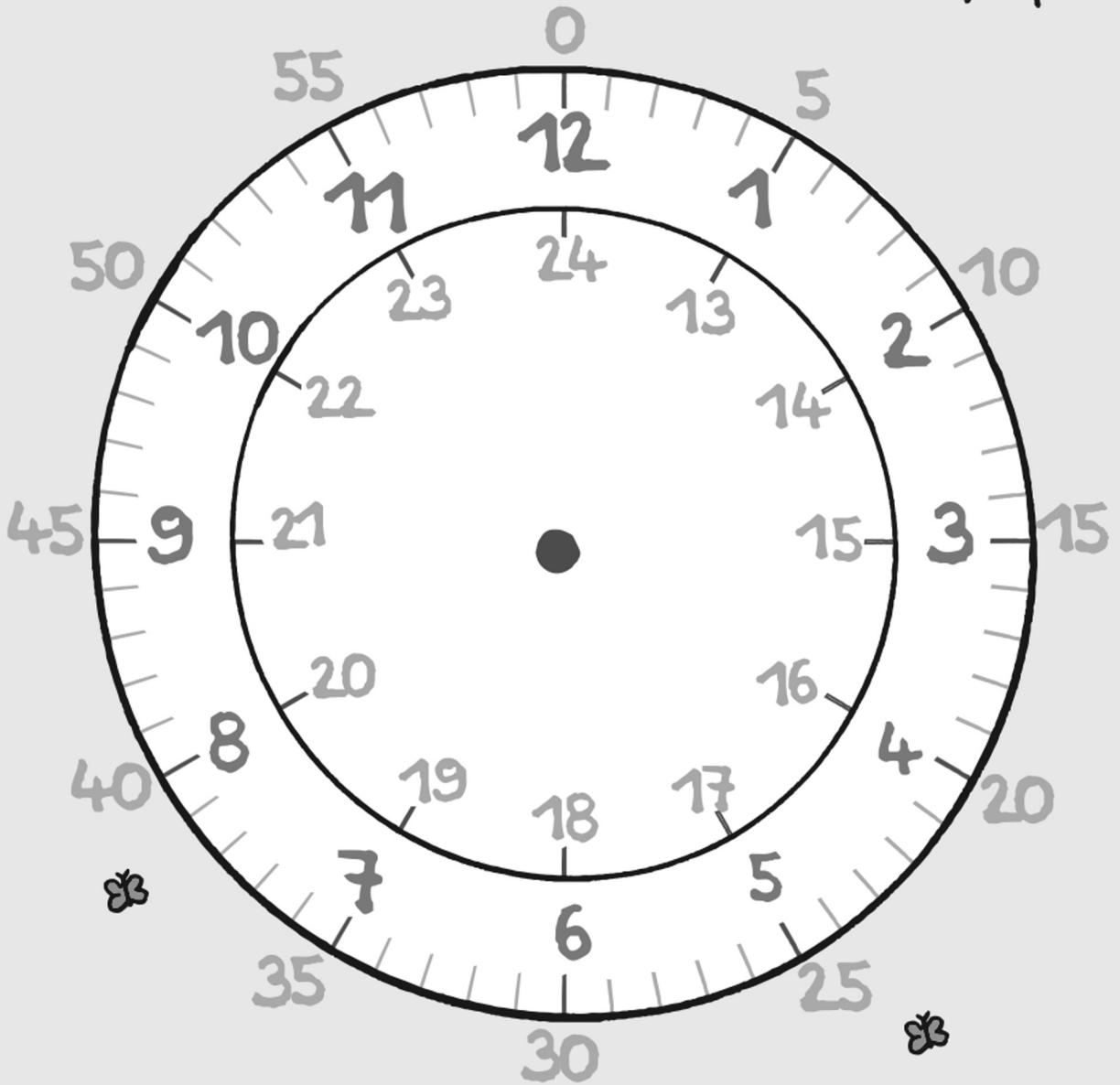
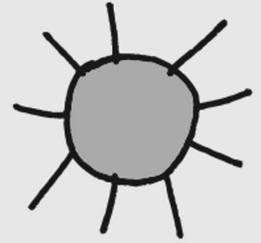
1 MOIS

28, 29, 30 ou
31 JOURS

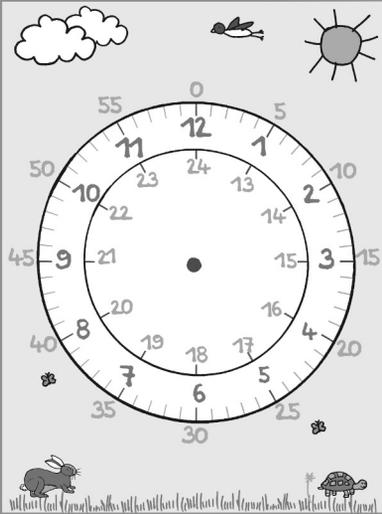
1 AN

12 MOIS

L'HEURE



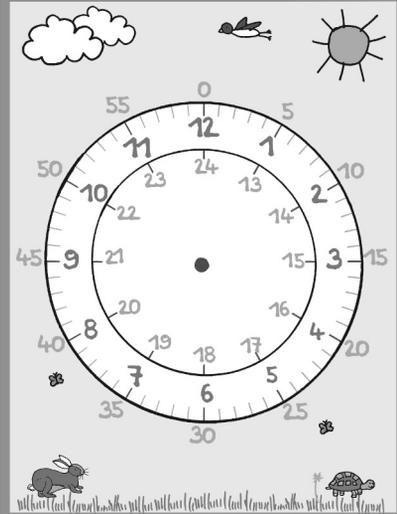
L'HEURE



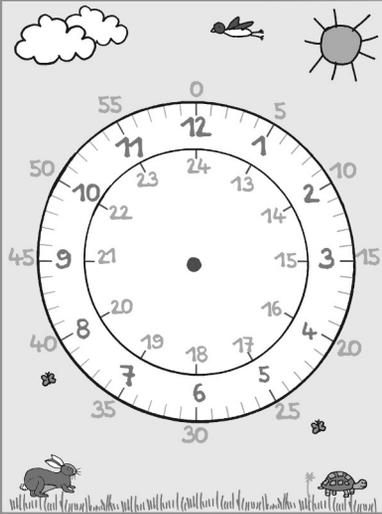
L'HEURE



L'HEURE



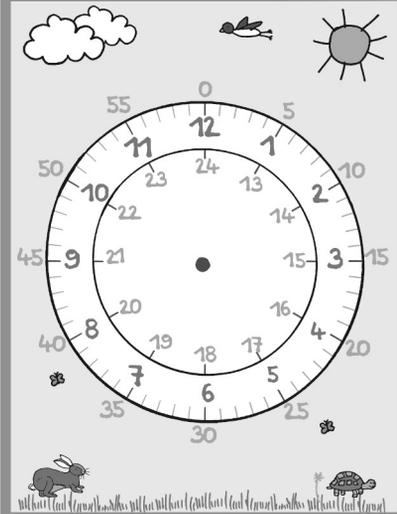
L'HEURE



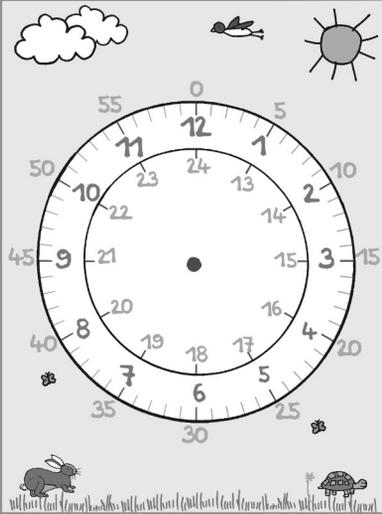
L'HEURE



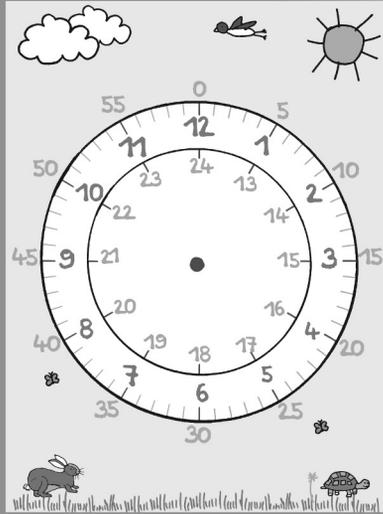
L'HEURE



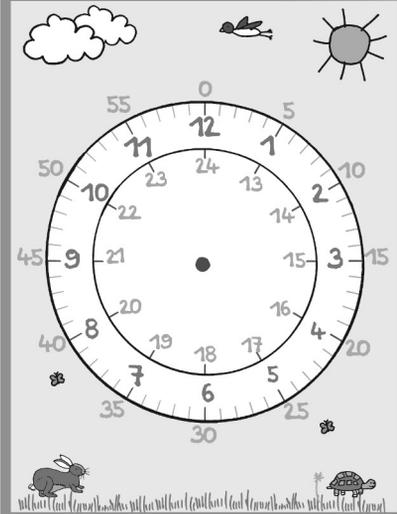
L'HEURE

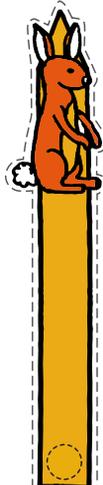
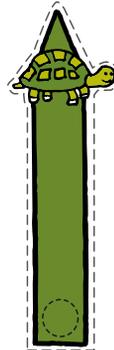
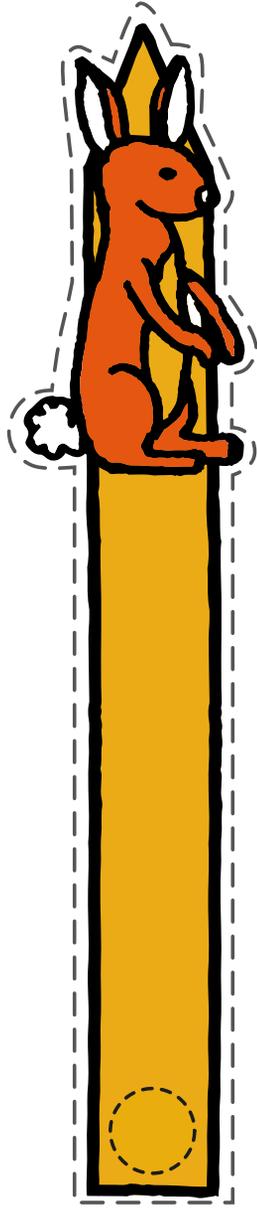
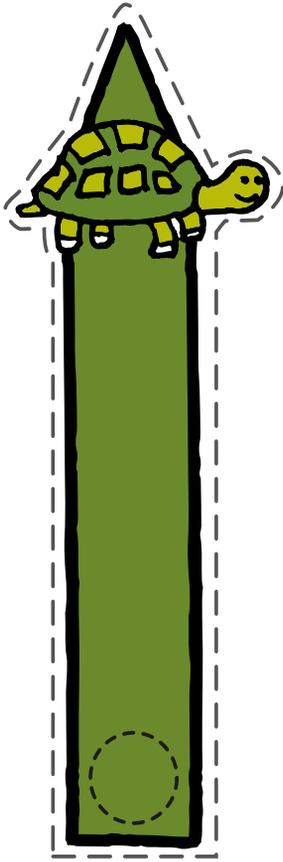


L'HEURE



L'HEURE

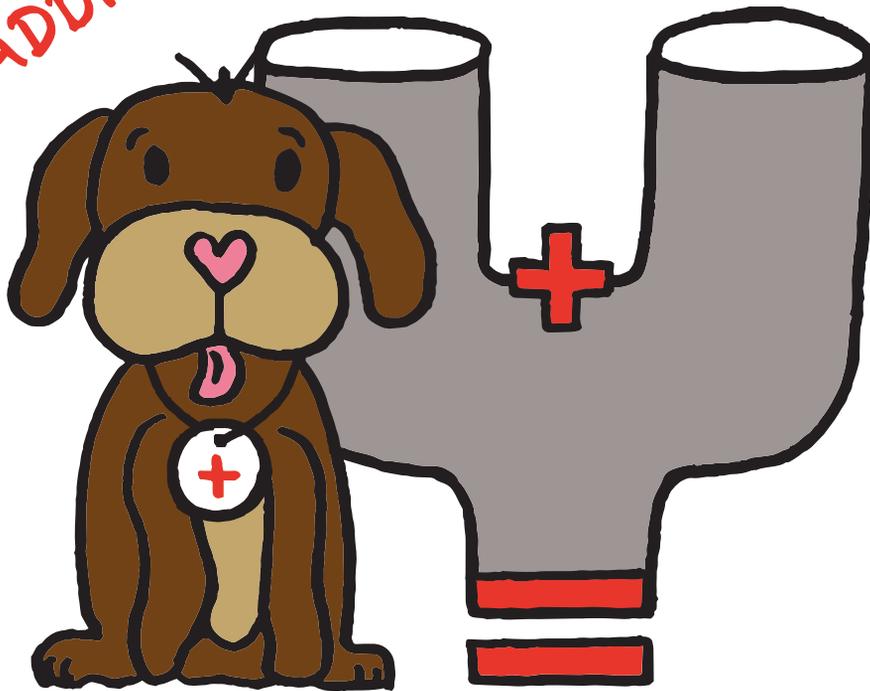




LES OPERATIONS

PARTIE 4

ADDIPLUCE



+ ADDITIONNER +

Ajouter, réunir,
mettre ensemble



- SOUSTRAIRE -

Enlever, ôter,
supprimer, diminuer



× MULTIPLIER ×

Ajouter plusieurs
fois la même chose



: DIVISER ÷

Partager, répartir
en parts égales



L'ADDITION SANS RETENUE

Toujours PLUS à la fin!

C	D	U
1	4	3
	2	2
1	6	9

Callouts: $1+0+0$, $4+2$, $3+2+4$

L'ADDITION AVEC RETENUES

Toujours PLUS à la fin!

C	D	U
1	4	3
	2	2
6	6	4

Callouts: $1+3+2$, $8+6$, 1

L'ADDITION SANS RETENUE

Toujours PLUS à la fin!

C	D	U
1	4	3
	2	2
1	6	9

Callouts: $1+0+0$, $4+2$, $3+2+4$

L'ADDITION AVEC RETENUES

Toujours PLUS à la fin!

C	D	U
1	4	3
	2	2
6	6	4

Callouts: $1+3+2$, $8+6$, 1

LA SOUSTRACTION SANS RETENUE

C	D	U
5	3	6
4	2	3
1	1	3

$5-4$ $3-2$ $6-3$

←

LA SOUSTRACTION AVEC RETENUES

C	D	U
8	6	12
2	3	8
6	2	4

$8-2$ $6-3-1$ $12-8$

←

LA SOUSTRACTION SANS RETENUE

C	D	U
5	3	6
4	2	3
1	1	3

$5-4$ $3-2$ $6-3$

←

LA SOUSTRACTION AVEC RETENUES

C	D	U
8	6	12
2	3	8
6	2	4

$8-2$ $6-3-1$ $12-8$

←

LA MULTIPLICATION À UN CHIFFRE

Toujours PLUS à la fin!

C	D	U
	2	6
	4	4
1	0	24

Annotations: $4 \times 2 = 2$, $4 \times 6 = 24$. A dashed arrow points from the 2 in the tens column to the 2 in the units column.

LA MULTIPLICATION À DEUX CHIFFRES

Toujours PLUS à la fin!

C	D	U
	3	2
	2	4
1	2	8
6	4	0
7	6	8

Annotations: $4 \times 3 = 12$, $4 \times 2 = 8$, $2 \times 3 = 6$, $2 \times 2 = 4$, $1 + 6 = 7$, $2 + 4 = 6$, $8 + 0 = 8$. Arrows indicate the carrying process from units to tens and from tens to hundreds.

LA MULTIPLICATION À UN CHIFFRE

Toujours PLUS à la fin!

C	D	U
	2	6
	4	4
1	0	24

Annotations: $4 \times 2 = 2$, $4 \times 6 = 24$. A dashed arrow points from the 2 in the tens column to the 2 in the units column.

LA MULTIPLICATION À DEUX CHIFFRES

Toujours PLUS à la fin!

C	D	U
	3	2
	2	4
1	2	8
6	4	0
7	6	8

Annotations: $4 \times 3 = 12$, $4 \times 2 = 8$, $2 \times 3 = 6$, $2 \times 2 = 4$, $1 + 6 = 7$, $2 + 4 = 6$, $8 + 0 = 8$. Arrows indicate the carrying process from units to tens and from tens to hundreds.

DIVISION

PROFESSEUR DIVIDUS

Toujours MOINS à la fin!



Partager, répartir en parts égales

SOUSTRACTION

MINUS

Toujours MOINS à la fin!



Enlever, ôter, supprimer, diminuer

MULTIPLICATION

MULTIPLIÉE

Toujours PLUS à la fin!



Ajouter plusieurs fois la même chose

ADDITION

ADDIPEUCE

Toujours PLUS à la fin!



Ajouter, réunir, mettre ensemble

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ADDITION

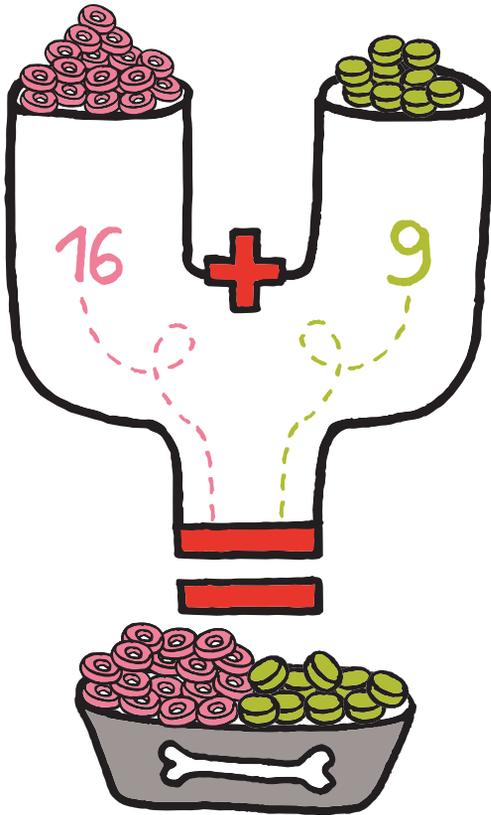
ADDIPEUCE

Toujours PLUS à la fin!



Ajouter, réunir, mettre ensemble

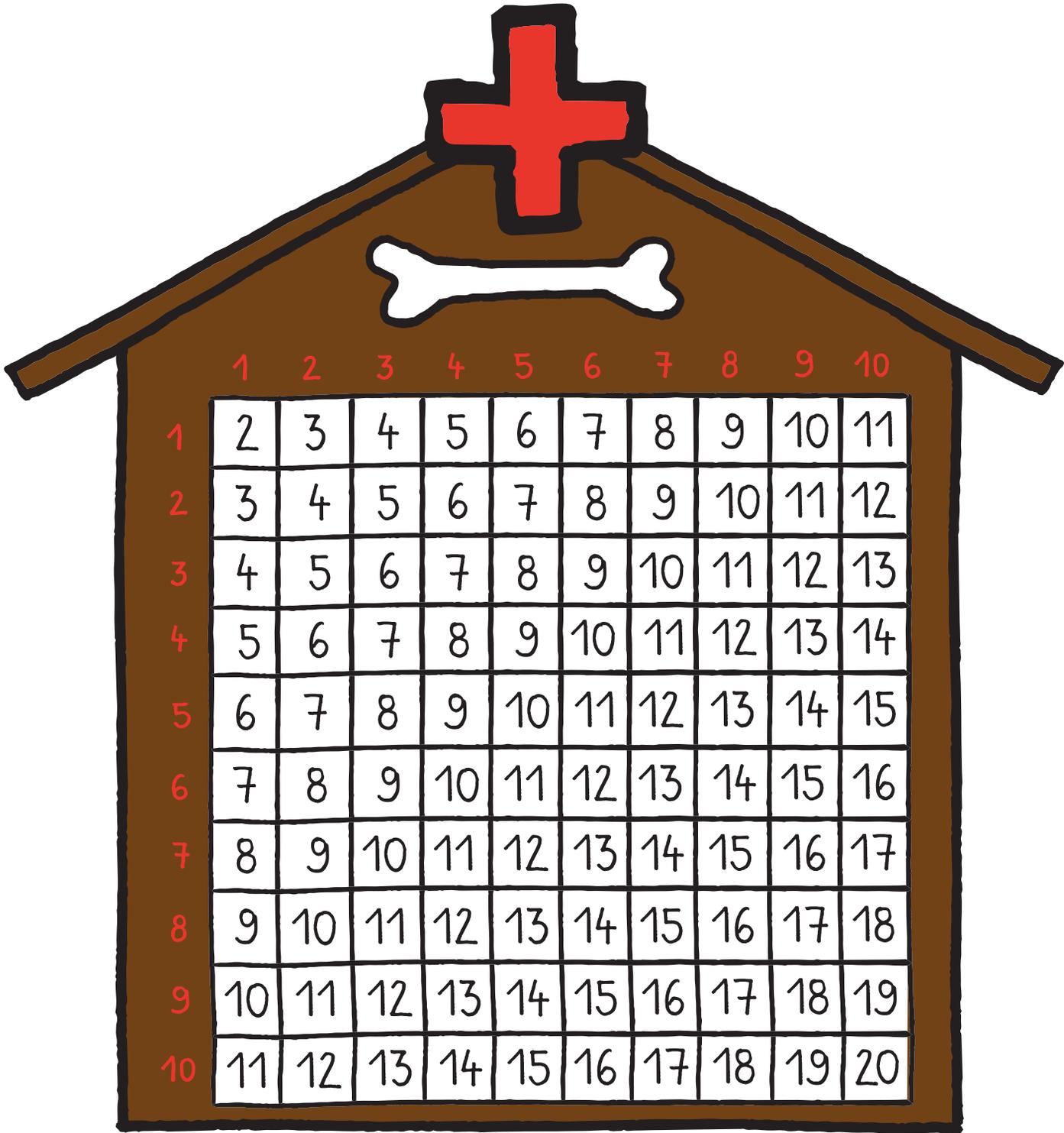
ADDITIONNER

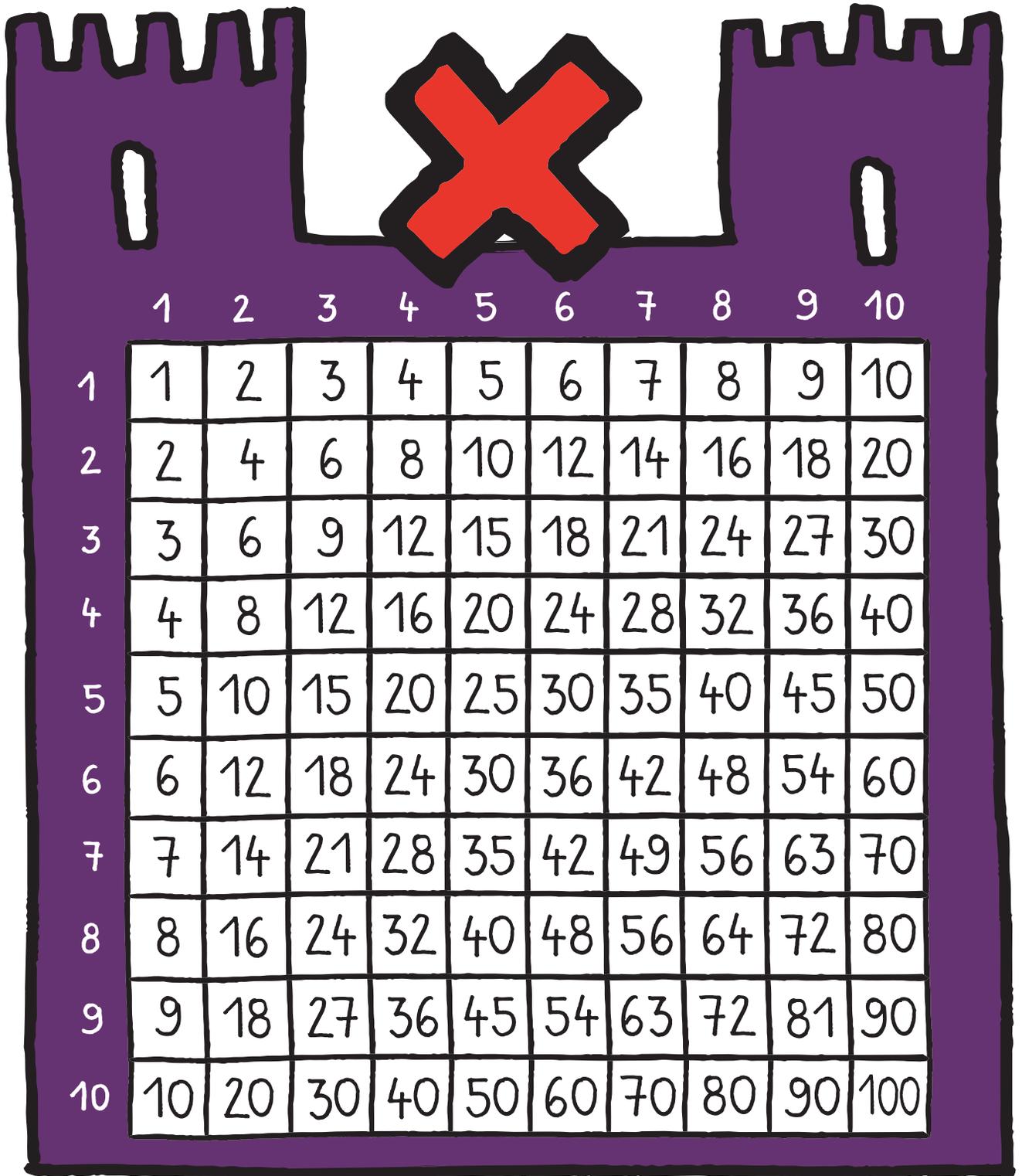


$$16 + 9 = 25$$

ADDIPUCE
ADORE LA MACHINE
QUI EN DONNE
PLUS!







FIN



Faites nous part de vos remarques, idées
et ressources!
Elles seront dessinées, intégrées et
partagées dans ce cahier !



A bientôt
Stéphanie & Maud

MERCI!