DIVINE EDUCATION CENTRE(DEC)

0784540287

0751565742

MATHEMATICS

LESSON NOTES TERM TWO 2023

(Abridged curriculum)

PRIMARY TWO

TOPICAL BREAK DOWN

- Horizontal division by 2.
- Long division by 2.
- Word problem.
- Horizontal division by 3.
- Long division by 3.
- Word problems.
- Horizontal division by 4.
- Word problems.
- Horizontal division by 5.
- Long division by 5.
- Word problems.

NUMBER PATTERNS AND SEQUENCES:

- Counting in twos.
- Number sequences by subtracting 2.
- Counting in threes by adding.
- Counting in threes by subtracting.
- Counting in fives by adding.
- Counting in fives by subtracting.
- Counting in tens by adding.
- Counting in tens by subtracting.
- Multiplying in webs.

FRACTIONS:

- Naming fractions.
- Writing fractions in figures.
- Shading fractions.
- Naming shaded parts.
- Naming un-shaded parts.
- Adding fractions.
- Word problems.
- Comparing fractions using bigger than or greater than.
- Subtraction of fractions.
- Word problems.
- Subtraction of fractions.
- Word problems.
- Multiplying fractions.
- Word problems.

ALGEBRA:

- Finding the missing numbers in addition.
- Word problems.
- Finding the missing numbers in subtraction.
- More missing numbers.
- Word problems.
- Finding missing numbers in multiplication.
- Finding missing numbers in division.
- More missing numbers in division.

OPERATIONS ON NUMBERS:

Vertical addition involving carrying.

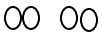
- Adding 2-digit numbers to 1-digt number.
- Adding 2-digit numbers to 2-digit numbers.
- Adding 3-digit numbers to 3-digit numbers.
- Word problems.
- Subtracting one-digit from 2-digit numbers.
- Subtracting 2-digit numbers from 2 digit numbers.
- Word problems.
- Horizontal multiplication by 6.
- Vertical multiplication by 6.
- Word problems.
- Multiplying by 7.
- Vertical multiplication by 7.
- Multiplication by 8.
- Vertical multiplication by 8.
- Horizontal multiplication by 9.
- Vertical multiplication by 9.
- Horizontal multiplication by 10.
- Vertical multiplication by 10.
- Perimeter of a rectangle.
- Perimeter of a triangle.

DIVISION:

Horizontal division by 2:

a. 2 ÷ 2 = 1

b. 4 ÷ 2 = 2



c. 6 ÷ 2 = 3

Activity:

Divide

a. 8 ÷ 2 =
b. 10 ÷ 2 =
c. 12 ÷ 2 =
d. 14 ÷ 2 =
e. 16 ÷ 2 =
f. 18 ÷ 2 =
g. 20 ÷ 2 =
h. 22 ÷ 2 =
j. 26 ÷ 2 =
k. 28 ÷ 2 =

Long division by 2:

- Divide.
- Write the answer.
- Multiply the answer by the divisor.
- Subtract.

a. 2 ÷ 2 =

$$2\overline{)2}\ \ 1$$

1x2 = 2

2 ÷ 2 = 1

2 ÷ 2 = 1

b. 4 ÷ 2 =

$$2\overline{)4}\ \ 2$$

2x2 = 4

4 ÷ 2 = 2

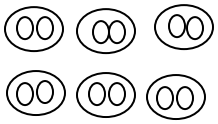
∴ 4 ÷ 2 = 2 = 2

c. 12 ÷ 2 =

x 6

$2\sqrt{12}$

6x2 = 12



∴ 12 ÷ 2

Activity:

a. $2\sqrt{6}$
b. $2\sqrt{22}$
c. $2\sqrt{12}$
d. $2\sqrt{24}$
e. $2\sqrt{}$
f. $2\sqrt{16}$
g. $2\sqrt{28}$
h. $2\sqrt{18}$
i. $2\sqrt{14}$
j. $2\sqrt{26}$

Word problems:

Examples:

Share 6 eggs equally between 2 girls. How many eggs will each get?

6 ÷ 2 = 3

Each will get 3 eggs.

Example II:

Share 2 mangoes equally between 2 girls.

2 ÷ 2 = 1

Each girl gets 1 mango.

Example III:

A boy has 2 legs. If Faith counts 16 legs, how many boys are there?

16 ÷ 2 = 8 boys.

There are 8 boys.

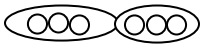
Activity:

1. Share 4 flowers equally between 2 pupils. How many flowers does each pupil get?
2. Share 6 sweets equally between 2 pupils. How many sweets does each pupil get?
3. Share 18 pens equally between 2 people. What does each person get?
4. Share 14 cakes equally between 2 children. What does each child get?
5. A cat has 2 ears. If Dorah counts 20 ears, how many cats are there?

Horizontal division by 3:

a. $3 \div 3 = 1$

b. $6 \div 3 = 2$



Activity:

a. $3 \div 3 =$
b. $12 \div 3 =$
c. $21 \div 3 =$
d. $33 \div 3 =$
e. $9 \div 3 =$
f. $15 \div 3 =$
g. $24 \div 3 =$
h. $20 \div 3 =$
i. $6 \div 3 =$
j. $18 \div 3 =$
k. $27 \div 3 =$
l. $36 \div 3 =$

Long division by 3:

a.
$$\begin{array}{r} 1 \\ 3\overline{)3} \\ 3 \\ \hline 0 \end{array}$$

$3 \div 3 = 1$

b.
$$\begin{array}{r} 2 \\ 3\overline{)6} \\ 6 \\ \hline 0 \end{array}$$

$6 \div 3 = 2$

Activity:

1. $3\overline{)3}$
7. $3\overline{)9}$

2. 3√12
3. 3√21
4. 3√33
5. 3√6
6. 3√27
8. 3√15
9. 3√24
10. 3√30
11. 3√18
12. 3 √36

Word problems:

1. Share 9 apples equally among 3 children. How many does each child get?
   9 ÷ 3 = 3

2. A stool has 3 legs. If Jane counts 15 legs, how many stools are there?
   15 ÷ 3 = 5 stools

Activity:

1. Share 3 balls equally among 3 children. What does each get?
2. Share 6 cakes equally among 3 pupils. How many cakes does each pupil get?
3. Share 9 flowers equally among 3 pupils. What does each pupil get?
4. Share 12 balls equally among 3 players. What does each player get?
5. A stool has 3 legs. If John counts 24 legs, how many stools are there?

Horizontal division by 4:

a. 4 ÷ 4 = 1

b. 8 ÷ 4 = 2

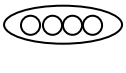
Activity:

a. 4 ÷ 4 =
b. 16 ÷ 4 =
c. 28 ÷ 4 =
d. 40 ÷ 4 =
e. 12 ÷ 4 =
f. 24 ÷ 4 =
g. 8 ÷ 4 =
h. 20 ÷ 4 =
i. 32 ÷ 4 =
j. 44 ÷ 4 =
k. 36 ÷ 4 =
l. 48 ÷ 4 =

Long division by 4:

a.
$$\begin{array}{r} 1 \\ 4\overline{)\,4} \\ 1\times 4 = 4 \\ \hline 0 \end{array}$$

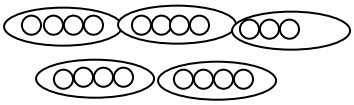
$4 \div 4 = 1$



$\therefore 4 \div 4 = 1$

b.
$$\begin{array}{r} 5 \\ 4\overline{)\,20} \\ 5\times 4 = 20 \\ \hline 0 \end{array}$$

$20 \div 4 = 5$



$\therefore 20 \div 4 = 5$

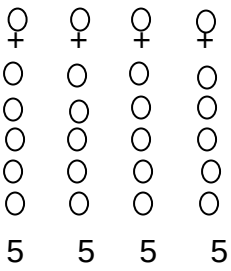
Activity:

a. $4\sqrt{4}$
b. $4\sqrt{16}$
c. $4\sqrt{16}$
d. $4\sqrt{40}$
e. $4\sqrt{8}$
f. $4\sqrt{8}$
f. $4\sqrt{20}$
g. $4\sqrt{32}$
h. $4\sqrt{44}$
i. $4\sqrt{12}$
j. $4\sqrt{24}$
l. $4\sqrt{48}$

Word problem:

a. Share 20 pencils equally among 4 children. How many does each get?

$20 \div 4 = 5$

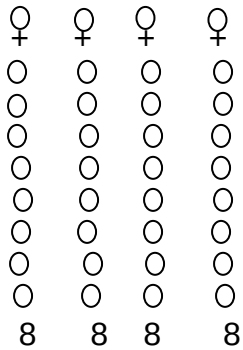


5 5 5 5

Each child gets 5 pencils.

b. A cow child has 4 legs. If Claire counts 32 legs, how many cows are there?

$32 \div 4 = 8$ cows



8 8 8 8

Activity:

1. Share 8 dresses equally among 4 girls. How many does each get?
2. Share 4 pencils equally among 4 pupils. How many does each pupil get?
3. Share 16 balls equally among 4 children. How many does each child get?
4. Share 20 books equally among 4 pupils. How many does each pupil get?
5. A cow has 4 legs. If Mary counts 24 legs, how many cows are there?

Horizontal division by 5:

a. $5 \div 5 =$
b. $20 \div 5 =$
c. $35 \div 5 =$
d. $50 \div 5 =$
e. $10 \div 5 =$
f. $25 \div 5 =$
g. $40 \div 5 =$
h. $55 \div 5 =$
i. $15 \div 5 =$
j. $30 \div 5 =$
k. $45 \div 5 =$
l. $60 \div 5 =$

Long division by 5:

a.
$$5\overline{)5}$$
$$5x1 = 5$$
$$\bigcirc$$

$5 \div 5 = 1$

b.
$$5\overline{)10}$$
$$2x5 = 10$$
$$\bigcirc\bigcirc$$

$10 \div 5 = 2$

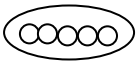
Activity:

a. $5\sqrt{5}$
b. $5\sqrt{20}$
c. $5\sqrt{35}$
d. $5\sqrt{50}$
e. $5\sqrt{10}$
f. $5\sqrt{25}$
g. $5\sqrt{40}$
h. $5\sqrt{55}$
i. $5\sqrt{15}$
j. $5\sqrt{30}$
k. $5\sqrt{45}$
l. $5\sqrt{60}$

Word problem:

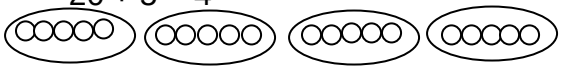
1. Share 5 cups of coffee equally among 5 teachers. How many does each teacher get?

   5 ÷ 5 = 1

   Each teacher gets 1 cup of coffee.
2. Share 20 toy cars equally among 5 pupils. How many does each get?

   20 ÷ 5 = 4

Activity:

1. Share 10 sweets equally among 5 children. How many does each get?
2. Share 15 mangoes equally among 5 children. How many does each child get?
3. Share 25 balls equally among 5 players. How many does each player get?
4. Share 30 pens equally among 5 pupils. How many does each pupil get?
5. Share 35 books equally among 5 children. How many does each child get?

NUMBER PATTERNS AND SEQUENCES:

Counting in twos:

a. 2 , 4 , 6 , 8 , 10 , 12
   +2 +2 +2 +2 +2

b. 3 , 5 , 7 , 9 , 11 , 13 , 15
   +2 +2 +2 +2 +2 +2

Activity:

a. 6 , 8 , 10 , 12 , ___, ___, ___.
b. ___, ___, ___, 18 , 20 , 22 , 24.
c. 80 , 82 , ___, ___, ___, 90 , ___.
d. 50 , ___, ___, ___, ___, 60 , ___.
e. 92 , 94 , ___, ___, ___.

Number sequences by subtracting 2:

20 , 18 , 16 , 14 , 12 , 10
-2 -2 -2 -2 -2

Activity:

a. 30 , 28 , 26 , 24 , ___, ___.
b. 17 , 15 , ___, ___, 9.
c. 100 , 98 , ___, 94 , ___ , 90 , ___.
d. 44 , ___ , ___ , 38 , ___ , ___.

Counting in threes by adding:

a. 0 , 3 , 6 , 9 , 12 , 15 , 18 , 21.
+3 +3 +3 +3 +3 +3 +3

b. 1 , 4 , 7 , 10 , 13 , 16 , 19 , 22
+3 +3 +3 +3 +3 +3 +3

Activity:

a. 0 , 3 6 , 15 , ___, ___, 24 , 27.
b. 6 , 9 , ___, 15 , ___, 21 ___, ___, 30.
c. 2 , 5 , 8 , ___, 14 , 17 , ___ , ___ , 26.
d. 5 , 8 , 11 , ___, ___, 20 , ___, ___, 29
e. 3 , 6 , ___, ___, ___, 18 , 21 , ___, ___.
f. 4 , 7 ___, ___, 16 , ___, 22 , 25 , ___.

Counting in threes by subtracting:

a. 16 , 13 , 10 , 7 , 4.
-3 -3 -3 -3

b. 18 , 15 , 12 , 9 , 6
-3 -3 -3 -3

Activity:

a. 27 , 24 , ___, ___, 15 , 9 , 6 ___.
b. 26 , 23 , ___, 20 ___, 14 , ___.
c. 30 , ___, ___, 21 , ___ , ___, 15 , ___.
d. 29 , 26 , ___, ___, ___ ,___.
e. 21 , 18 , ___, ___, ___, 6 , 3.
f. 25 , 22 , ___ , 16 , ___, ___, 7 , 4.

Counting in fives by adding:

a. 0 , 5 , 10 , 15 , 20 , 25 , 30.
+5 +5 +5 +5 +5 +5

b. 2 , 7 , 12 , 17 , 22 , 27 , 32.
+5 +5 +5 +5 +5 +5

Activity:

1. 10 , 15 , 20 , ___, ___, ___.
2. 1 , 6 , 11 , ___, ___, 26 , ___, 36.
3. 4 , 9 , 14 , ___, ___, 29 , ___.
4. 10 , ___, ___, 20 , ___, ___, ___.
5. 25 , ___, ___, 40 , 45 , ___, ___.

Counting in fives by subtracting:

a. 50 , 45 , 40 , 35 , 30
-5 -5 -5 -5

b. 25 , 20 , 15 , 10 , 5
-5 -5 -5 -5

Activity:

1. 27 , 22 , ___, ___, ___.
2. 30 , 25 , 20 , ___, ___, ___.
3. 51 , 46 , ___, ___, ___.
4. 51 , 46 , ___, ___, ___.
5. 95 , 90 , 85 , 80 , ___, ___, ___.
6. 75 , 70 , 65 , ___, ___, 55.

Counting in tens by adding:

a. 10 , 20 , 30 , 40 , 50.
+10 +10 +10 +10

b. 35 , 45 , 55 , 65 , 75.
+10 +10 +10 +10

Activity:

1. 8 , 18 , 28 , ___, ___, ___.
2. 20 , 30 , 40 , 50, ___, ___, ___.
3. 2 , 12 , 22 , 32 , ___, ___, ___.
4. 50 , 60 , 70 , ___, ___, ___.
5. ___, ___, 60 , 70 , 80 , 90.
6. 41 , 51 , 61 , 71, ___, ___, ___.
7. 25 , ___, 45 , 65 , ___, ___.

Counting in tens by subtracting:

a. 95 , 85 , 75 , 65 , 55.
-10 -10 -10 -10

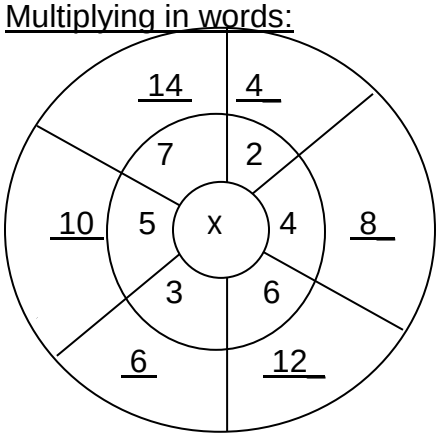
b. 50 , 40 , 30 , 20 , 10 , 0
-10 -10 -10 -10 -10

Activity:

1. 58 , 48 , ___, 28 , ___.
2. 100 , 90 , 80 , ___, ___, ___, ___.
3. 95 , 85 , 75 , 65 , ___ , ___, ___.
4. 70 , 60 , ___, ___, 30.

5. 32 , 22 , ___, ___.

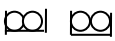
Multiplying in words:



a. 3 x 2 = 6

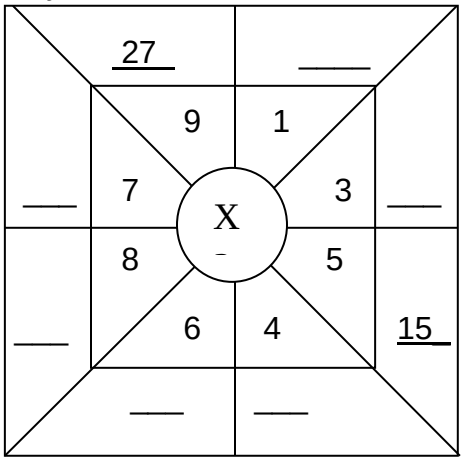
c. 2 x 2 = 4

b. 2 x 2 = 4



d. 5 x 2 = 10

Activity:

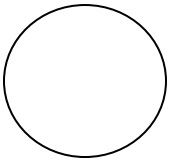


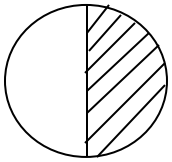
FRACTIONS:

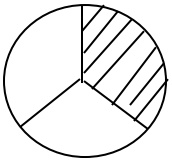
What is a fraction?

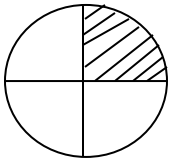
A fraction is a part of a whole.

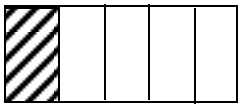
Naming fractions:

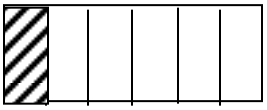
a.  Whole

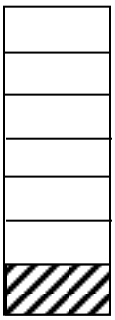
b.  1 part out of 2
½ - A half.

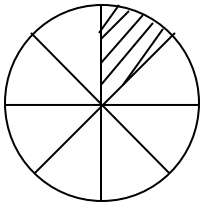
c.  1 part out of 3
⅓ - A third.

d.  1 part out of 4
¼ - A quarter

e.  1 part out of 5
$^1/_5$ – One fifth.

f.  1 part out of 6
1/6 – One sixth.

g.  1 part out of 7
$^1/_7$ – one seventh.

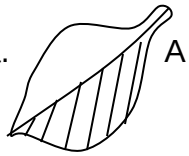
h.  1 part out of 8
$^1/_8$ – one eighth

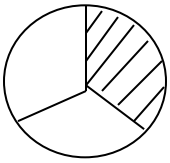
Activity:

Write the following fractions in words.

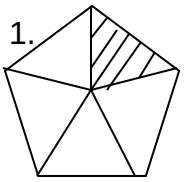
a. ½ d. ⅓ g. ¼
b. $^1/_5$ e. $^1/_6$ h. $^1/_7$
c. $^1/_8$ f. $^1/_9$ i. $^1/_{10}$.

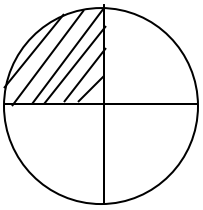
Writing fractions in figures:

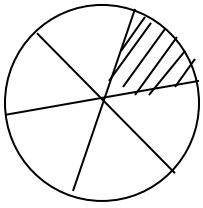
a.  A half = ½

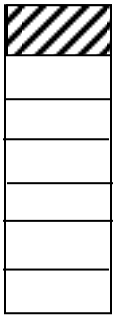
b.  A third = ⅓

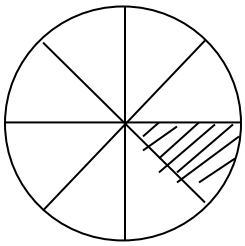
Activity:

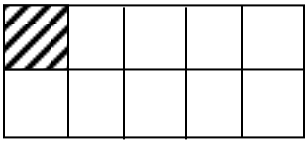
1.  One fifth =

2.  One quarter =

3.  One sixth =

4.  One seventh

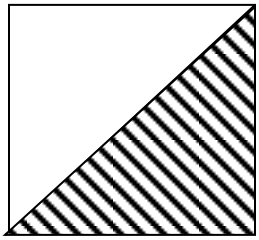
5.  One eighth =

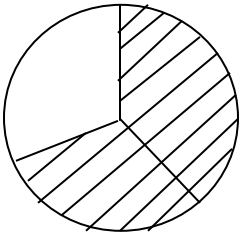
6.  One tenth =

Shading fractions:

- Top number represents the number of parts to shade.
- Bottom number stands for the total number of parts.

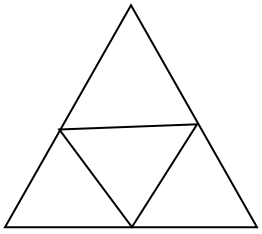
a. Shade ½

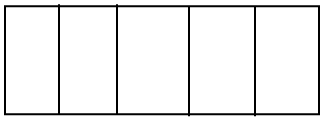


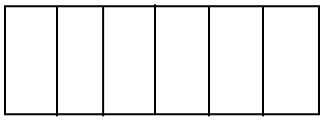
b. ⅔ 

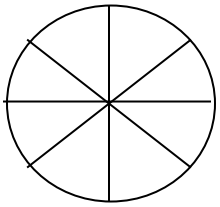
Activity:

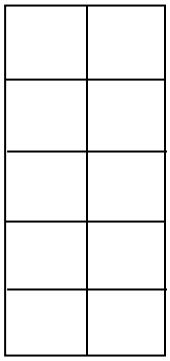
Shade the given fractions.

1. ¾ 

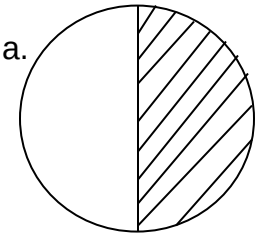
2. $^{2}/_{5}$ 

3. $^{4}/_{6}$ 

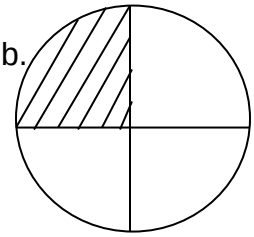
4. $^{3}/_{8}$ 

5. $^{6}/_{10}$ 

Naming shaded parts:

a. 

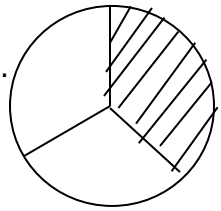
½

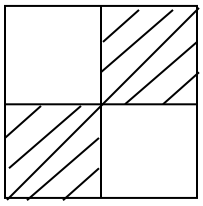
b. 

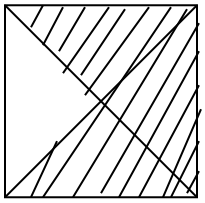
¼

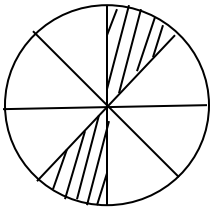
Activity:

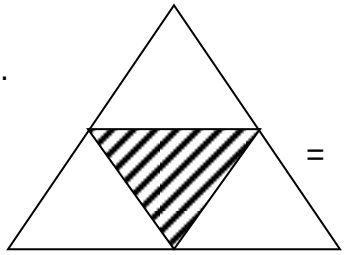
What part is shaded?

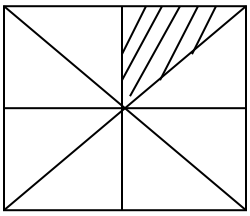
1.  =

2.  =

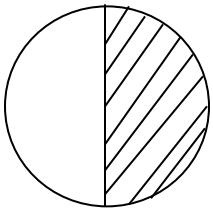
3.  =

4.  =

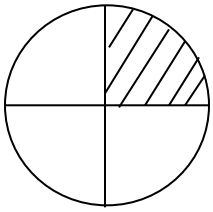
5.  =

6. 

Naming unshaded parts:

a. 

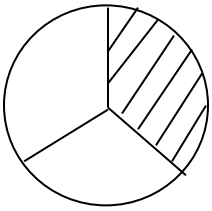
½

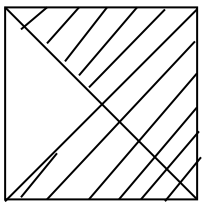
b. 

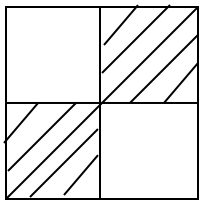
¾

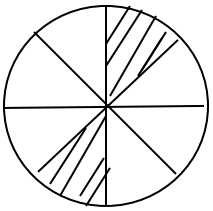
Activity:

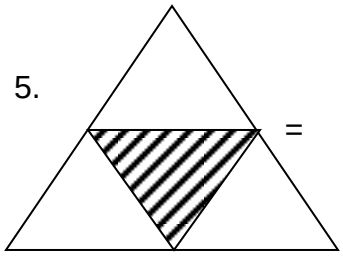
Name the unshaded fraction:

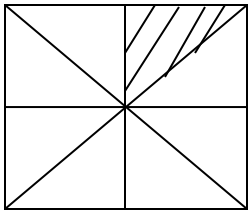
1.  =

2.  =

3.  =

4.  =

5.  =

6.  =

Adding fractions:

a. $\frac{1}{3} + \frac{1}{3} = \frac{1+1}{3} = \frac{2}{3}$

b. $\frac{2}{8} + \frac{2}{8} = \frac{2+1}{8} = \frac{3}{8}$

Activity:

Add the following:

1. $\frac{3}{4} + \frac{1}{4} =$
2. $\frac{4}{8} + \frac{3}{8} =$
3. $\frac{2}{6} + \frac{1}{6} =$
4. $\frac{1}{4} + \frac{1}{4} =$
5. $\frac{1}{8} + \frac{1}{8} =$
6. $\frac{1}{6} + \frac{1}{6} =$
7. $\frac{1}{5} + \frac{2}{5} =$
8. $\frac{5}{9} + \frac{3}{9} =$

9. $\frac{1}{8} + \frac{2}{8} =$

10. $\frac{1}{3} + \frac{1}{3} =$

Word problems:

a. A pupil read ⅛ of the book on Monday and ⅛ of it on Tuesday. What fraction did the pupil read altogether?

$\frac{1}{8} + \frac{1}{8} = \frac{1+1}{8} = \frac{2}{8}$

b. Find the sum of $^{7}/_{15}$ and $^{4}/_{15}$

$\frac{7}{15} + \frac{4}{15} = \frac{7+4}{15} = \frac{11}{15}$

Activity:

1. I walked $^{4}/_{9}$ of the journey and $^{3}/_{9}$ of it. What fraction did I cover altogether?
2. Jane dug $^{3}/_{10}$ of the garden and Deo dug $^{4}/_{10}$. What fraction did they dig altogether?
3. Musa ate $^{7}/_{15}$ of the cake and Namugga ate $^{4}/_{15}$ of the cake. What fraction of the cake did they eat?
4. Andrew wrote $^{3}/_{8}$ of the book in the morning and $^{4}/_{8}$ of it in the evening. What fraction of the book did he write?
5. A child walked $^{3}/_{10}$ of the journey and ran $^{5}/_{10}$ of the journey. What fraction of the journey did the child cover?
6. Find the sum of $^{1}/_{5}$ and $^{3}/_{5}$

Subtraction of fractions:

a. $\frac{2}{3} - \frac{1}{3} = \frac{2-1}{3} = \frac{1}{3}$

b. $\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4}$

Activity:

1. $\frac{3}{5} - \frac{1}{5} =$

2. $\frac{5}{2} - \frac{2}{6} =$

3. $\frac{6}{8} - \frac{2}{8} =$

4. $\frac{7}{9} - \frac{2}{9} =$

5. $\frac{2}{3} - \frac{1}{3} =$

6. $\frac{3}{4} - \frac{1}{4} =$

7. $\frac{4}{5} - \frac{1}{5} =$

8. $\frac{5}{10} - \frac{2}{10} =$

9. $\frac{7}{10} - \frac{3}{10} =$

10. $\frac{9}{10} - \frac{4}{10} =$

Word problems:

1. A boy had $^5/_6$ of the cake. He ate $^2/_6$ of it. What fraction remained?
   $\frac{5}{6} - \frac{2}{6} = \frac{5-2}{6} = \frac{3}{6}$

2. Find the difference of $^8/_{12}$ and $^3/_{12}$.
   $\frac{8}{12} - \frac{3}{12} = \frac{8-3}{12} = \frac{5}{12}$

Activity:

1. What is the difference of $^{11}/_{12}$ and $^6/_{12}$?
2. A bowl was $^{11}/_{12}$ full of sugar. I used $^5/_{12}$ of it. What fraction was left?
3. Subtract: $^4/_5 - {}^2/_5$
4. Andrew ate $^7/_9$ of a cake, he ate $^5/_9$ of it. What fraction remained?
5. A water tank was $^7/_8$ full. We used $^4/_8$ of it. What fraction was left?

More word problems:

a. A girl had an orange. She gave away ¾ of it. What fraction remained?
   $\frac{4}{4} - \frac{3}{4} = \frac{4-3}{4} = \frac{1}{4}$

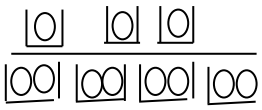
b. A garden has 8 equal parts. 3 parts out of them are planted with maize. What fraction remained?
   $\frac{8}{8} - \frac{3}{8} = \frac{8-3}{8} = \frac{5}{8}$

Activity:

1. John painted $^7/_{10}$ of his house on Monday. What fractions of his house has not been painted?
2. Fausta ate $^4/_5$ of an orange. What fraction remained?
3. A child used $^3/_{10}$ of water. What fraction remained?
4. After travelling $^3/_7$ of the journey. What fract6ion is left for me to cover?
5. A pupil did $^5/_9$ of his home work. What fraction of the home work as left?
6. A shopkeeper sold $^4/_{10}$ of a bag of sugar on Monday. What fraction of the bag is left?

Multiplication fractions:

a. $\frac{3}{4} \times \frac{1}{2} = \frac{3 \times 1}{4 \times 2} = \frac{3}{8}$



b. $\frac{1}{3} \times \frac{1}{2} = \frac{1 \times 1}{3 \times 2} = \frac{1}{6}$

Activity:

Multiply the following:

1. $\frac{3}{4} \times \frac{2}{4} =$
2. $\frac{1}{5} \times \frac{2}{3} =$
3. $\frac{5}{5} \times \frac{2}{5} =$
4. $\frac{2}{6} \times \frac{1}{3} =$
5. $\frac{1}{3} \times \frac{2}{3} =$
6. $\frac{2}{4} \times \frac{2}{5} =$

Word problems:

a. What is ½ of 8 oranges?
   = ½ x 8
   $= \frac{1}{2} \times \frac{8}{1} = \frac{1 \times 8}{2 \times 1} = \frac{8}{2}$
   $= \frac{8}{2}$ = 8 ÷ 2

   = 4 oranges.

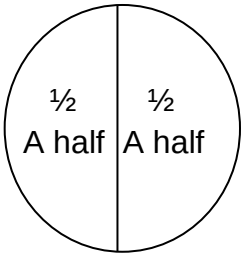
b. what is ⅓ of 12 boys?
   1 x 12
   3
   $= \frac{1}{3} \times \frac{12}{1} = \frac{1 \times 12}{3 \times 1} = \frac{12}{3}$
   $\frac{12}{3}$ = 12 ÷ 3
   = 4 boys.

Activity:

1. Find ½ of 6 girls.
2. What is ½ of 10 houses?
3. What is ¼ of 8?
4. What is ¼ of 20 pupils?
5. What is $^1/_{15}$ of 15 apples?
6. Find $^1/_7$ of 21.

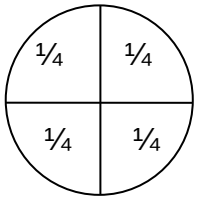
Comparing fraction:

a. How many halves make a whole?



2 halves make a whole.

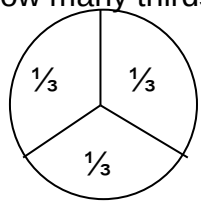
b. How many quarters make whole?



4 quarters Make a whole.

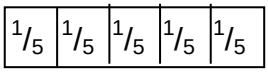
Activity:

1. How many thirds make a whole?



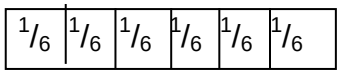
_____

2. How many fifths make a whole?



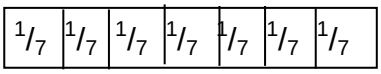
_____

3. How many sixths make a whole?



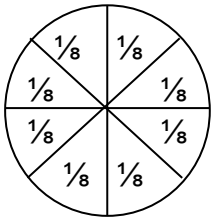
_____

4. How many sevenths make a whole.



_____

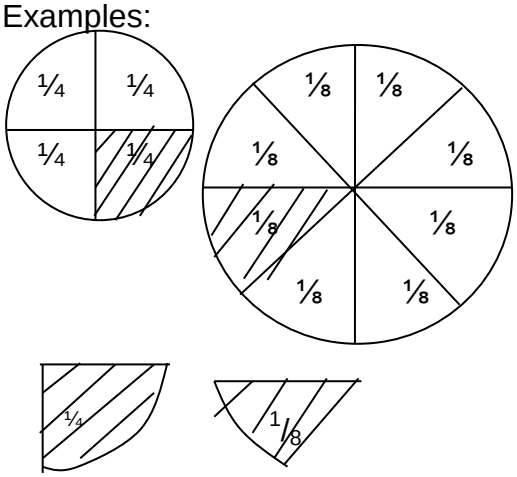
5. How many eights make a whole?



_____

Comparing fractions using greater than/bigger than:

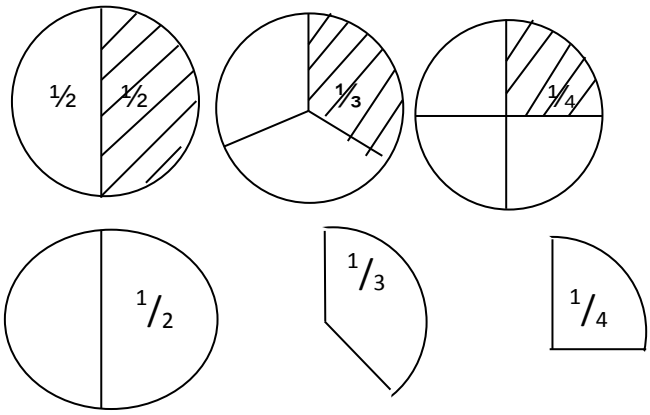
Examples:



¼ is greater than ⅛

¼ is bigger than ⅛

Activity:



Which is bigger?

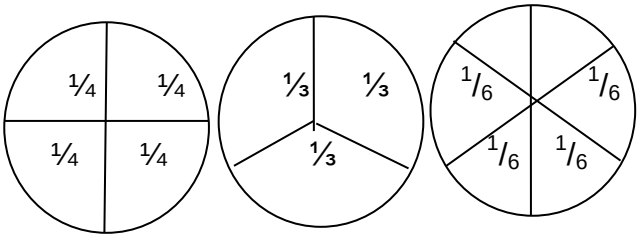
a. ½ or ⅓
   ½ is bigger.

b. ½ or ¼
   _____

c. ⅓ or ¼
   _____

d. ½ or ⅓
   _____

Comparing using bigger than or greater than:



Which is smaller?

a. $\frac{1}{3}$ or $\frac{1}{5}$

$\frac{1}{5}$ is smaller.

b. $\frac{1}{3}$ or $\frac{1}{4}$

c. $\frac{1}{3}$ or $\frac{1}{6}$

d. $\frac{1}{5}$ or $\frac{1}{4}$

e. $\frac{1}{4}$ or $\frac{1}{5}$

f. $\frac{1}{4}$ or $\frac{1}{6}$

Use the words (greater than or less than).

a. $\frac{1}{3}$ is _____ $\frac{1}{2}$

b. $\frac{1}{2}$ is _____ $\frac{1}{6}$ (The teacher uses even the symbols <,> or =)

c. $\frac{1}{3}$ is _____ $\frac{1}{6}$

d. $\frac{1}{4}$ is _____ $\frac{1}{2}$

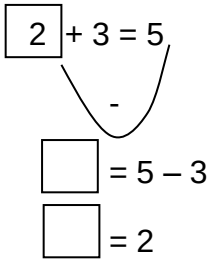
e. $\frac{1}{6}$ is _____ $\frac{1}{4}$

f. $\frac{1}{2}$ is _____ $\frac{1}{3}$

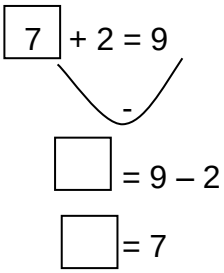
ALGEBRA:

Finding the missing numbers:

Example:



Example 2:

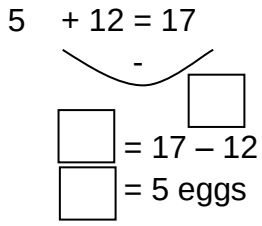


Activity:

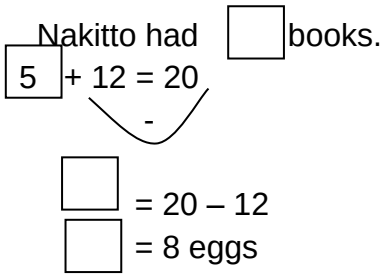
1. ☐ + 4 = 6
2. ☐ + 2 = 6
3. ☐ + 2 = 4
4. ☐ + 1 = 9
5. ☐ + 3 = 6
6. ☐ + 6 = 7
7. ☐ + 7 = 8
8. ☐ + 1 = 4
9. ☐ + 2 = 6
10. ☐ + 8 = 8

Word problems:

a. Babirye had some eggs. She was given 12 more. She has 17 eggs now.Babirye had eggs



b. Nakitto had s ome books. She was given 12 more. How many books had Nakitto at first?

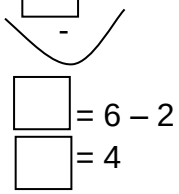


Activity:

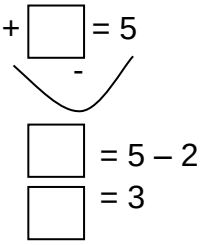
1. Our headmaster had some boxes. He bought 1 box more. Now he has 10 boxes. How many boxes had the headmaster before?
2. Mr. Tamale had some goats. He bought 4 goats more. He now has 7 goats. How many goats had Mr. Tamale before?
3. Akello had some eggs .Her mother gave her 3 more eggs .How many eggs had she before?
4. Mr. Olobo had some cups .His friend gave him 2more .Now he has 12cups.How many cups had she before?

Finding the missing numbers:

a. 2 + 4 = 6



b. 2 + = 5



Activity:

1. 5 + = 5
2. 2 + = 4
3. 4 + = 6
4. 6 + = 7
5. 8 + = 8
6. 3 + = 9
7. 5 + = 10

8. 7 + ☐ = 12

9. 1 + ☐ = 6

10. 5 + ☐ = 8

More missing numbers:

a. ☐11 - 3 = 8

+

☐ = 8 + 3

☐ = 11

b. ☐32 - 12 = 20

+

☐ = 20 + 20

☐ = 32

Activity:

1. ☐ - 3 = 2
2. ☐ - 5 = 8
3. ☐ – 3 = 9
4. ☐ – 4 = 7
5. ☐ – 1 = 12
6. ☐ – 2 = 10
7. ☐ – 8 = 5
8. ☐ – 4 = 9
9. ☐ – 5 = 5
10. ☐ – 6 = 6

Word problems:

1. Father had some books. He gave me 5 books and remained with 7 books. How many books did he have at first?
   Father had books
   □ - 5 = 7
   +
   □ = 7 + 5
   □ = 12 books.

2. Mum had a basket of oranges. She gave us 12 of them and remained with 12 oranges?
   Mum had oranges
   □ - 12 □
   +
   □ = 12 + 12
   □ = 24 oranges

Activity:

1. Mum had a basket of oranges. She gave us 12 of them and remained with 5 oranges. How many oranges had Mum before?
2. Kizito had some bananas. He gave away 7 bananas and remained with 5 bananas. How many bananas had heat first?
3. Danze had some hens. He sold 5 of them. He remained with 11 of them. How many hens had he before?
4. There were some mangoes in a basket. We ate 6 mangoes. 13 mangoes remained. How many mangoes were in the basket before?

Finding missing number:

a. 5 - 3 = 2
   -
   □ =5 – 2
   □ = 3

b. 14 - 4 = 10
   -
   □ = 14 – 10
   □ = 4

Activity:

1. 4 - ☐ =3
2. 5 - ☐ = 2
3. 6 - ☐ = 4
4. 7 - ☐ = 3
5. 8 - ☐ = 3
6. 9 - ☐ = 4
7. 11 - ☐ = 6
8. 14 - ☐ = 9
9. 13 - ☐ = 6
10. 15 - ☐ = 7

Finding the missing numbers:

Examples:

a. 3 x ☐ = 6

÷

6 ÷ 3

☐ = 2

b. 4 x ☐ = 24

÷

☐ = 24 ÷ 4

☐ = 6

Activity:

1. 6 x ☐ = 12
2. 7 x ☐ = 14
3. 10 x ☐ = 20
4. 5 x ☐ = 15

5. 5 x ☐ = 20

6. 4 x ☐ = 16

7. 7 x ☐ = 35

8. 2 x ☐ = 10

9. 3 x ☐ = 9

10. 4 x ☐ = 8

More missing numbers:

Example i:

6 ÷ ☐ = 3

÷

☐ = 6 ÷ 3

☐ = 2

Example II:

15 ÷ ☐ = 3

÷

☐ = 15 ÷ 3

☐ = 5

Activity:

1. 4 ÷ ☐ = 2

2. 6 ÷ ☐ = 2

3. 6 ÷ ☐ = 3

4. 8 ÷ ☐ = 2

5. 8 ÷ ☐ = 4

6. 8 ÷ ☐ = 3

7. 12 ÷ ☐ = 3

8. 32 ÷ ☐ = 4

9. 16 ÷ ☐ = 4

10. 12 ÷ ☐ = 6

More missing numbers:

a. ☐ ÷ 4 = 3

X

☐ = 4 x 3

☐ = 12

b. ☐ ÷ 5 = 4

X

☐ = 5 x 4

☐ = 20

Activity:

1. ☐ ÷ 1 = 1
2. ☐ ÷ 2 = 1
3. ☐ ÷ 2 = 2
4. ☐ ÷ 3 = 5
5. ☐ ÷ 5 = 4
6. ☐ ÷ 4 = 1
7. ☐ ÷ 4 = 7
8. ☐ ÷ 5 = 2
9. ☐ ÷ 4 = 6
10. ☐ ÷ 3 = 4

OPERATION ON NUMBERS:

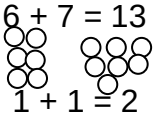
Vertical addition involving carrying:

Adding 2 digit numbers to 1 digit:

a.

T	O
1	6
+	7
2	3

6 + 7 = 13



1 + 1 = 2

b.

T	O
2	3
+	9
3	2

3 + 9 = 12

1 + 2 = 3

Activity:

1.

T	O
1	5
+	5

6.

T	O
1	5
+	8

2.

T	O
2	2
+	8

6.

T	O
2	4
+	7

3.

T	O
2	7
+	8

6.

T	O
3	6
+	4

4. T O

6. T O

```
  1  3        1  5
+    8      +    9
-------    -------
```

5.
```
  T  O
  1  8
+    9
-------
```

6.
```
  T  O
  3  2
+    8
-------
```

Adding 2 digit numbers to 2 digit numbers:

a.
```
  T  O
  2  3
+ 1  8
-------
  4  1
```
3 + 8 = 11
1 + 2 + 1 = 4

b.
```
  T  O
  3  5
+ 1  6
-------
  4  1
```
5 + 6 = 11
1 + 3 + 1 = 5

Activity:

1.
```
  T  O
  3  4
+ 2  8
-------
```

6.
```
  T  O
     3  6
+    2  6
----------
```

2.
```
  T  O
  5  5
+ 1  7
-------
```

7.
```
  T  O
     5  3
+    1  8
----------
```

3.
```
  T  O
  2  4
+ 3  8
-------
```

8.
```
  T  O
     5  8
+    1  9
----------
```

4.
```
  T  O
  5  4
+ 2  8
-------
```

9.
```
  T  O
     5  8
+    1  7
----------
```

5.
```
  T  O
  4  3
+ 1  9
-------
```

10.
```
  T  O
     4  8
+    2  4
---------
```

Adding 3 – digit numbers to 3 – digit numbers:

a.
```
  H  T  O
  3  6  2
+ 1  2  8
---------
  4  9  0
```
2 + 8 = 10
1 + 6 + 2 = 9
3 + 1 = 4

b.
```
  H  T  O
  4  1  9
+ 1  2  8
---------
  4  9  0
```
9 + 1 = 10
1 + 1 + 9 = 11
1 + 4 + 1 = 6

Activity:

1.
```
     2  1  4
+    1  3  7
------------
```

2.
```
     3  4  2
+    2  4  8
------------
```

3.
```
     1  6  5
+    3  5  8
------------
```

4.
```
     2  2  4
+    4  8  5
------------
```

5.
```
     3  2  5
+    5  8  7
------------
```

6.
```
     2  6  5
+    7  4  8
------------
```

7.
```
     1  7  4
+    4  1  6
------------
```

8.
```
     3  4  5
+    3  2  9
------------
```

9.
```
     2  6  5
+    6  3  7
------------
```

Word problem:

a. Kaypondo had 29 pens. Juma gave her 4 more pens. How many pens does Kayondo have now?

2 9 pens
\+ 4 pens
3 3 pens

b. Ssekyewa had 17 cakes. He got 15 more cakes. How many cakes does he have now?

1 7 cakes
\+ 1 5 cakes
3 2 cakes

Activity:

1. Amos had 16 books. His mother gave him 5 more books. How many books does Amos have now?
2. Nabbuto ate 9 pancakes on Monday. On Tuesday she ate 7 pancakes. How many pancakes did she eat altogether?
3. Find the sum of 28 and 13.
4. Onyango had 34 mangoes. Sarah had 16 mangoes. How many mangoes do they have altogether?
5. Agasha had 280 oranges. She got 320 more oranges. How many oranges does she have altogether?

Subtracting one digit from 2 – digit numbers:

a.

T	O	
2	3	13 – 7 = 6
-	7	1 – 0 = 1
1	6	

b.

T	O	
2	3	13 – 7 = 6
-	7	1 – 0 = 1
1	6	

Activity:

1.
	T	O
	3	1
-		2

6.
	T	O
	4	2
-		4

2.
	T	O
	4	3
-		6

7.
	T	O
	4	1
-		7

3.
	T	O
	5	4
-		5

8.
	T	O
	5	1
-		3

4.
	T	O
	5	5
-		7

9.
	T	O
	6	3
-		8

5.
	T	O
	2	5
-		6

10.
	T	O
	3	7
-		8

Subtracting 2-digit numbers from 2-digit numbers:

a.
	T	O
	3	6
-	1	7
	1	9

16 – 7 = 9
2 – 1 = 1

b.
	T	O
	8	2
-	3	4
	4	8

12 – 4 = 8
7 – 3 = 4

Activity:

1.
	T	O
	2	5
-	1	6

6.
	T	O
	7	3
-	1	8

2.
	T	O
	6	4
-	4	5

7.
	T	O
	3	7
-	1	8

3.
	T	O
	8	6
-	4	9

8.
	T	O
	6	3
-	4	8

4.
	T	O
	3	8
-	2	9

9.
	T	O
	5	2
-	2	4

5.
	T	O
	8	5
-	6	7

10.
	T	O
	3	7
-	2	8

Word problems:

a. Subtract 8 from 44.

4	4
-	8
3	6

14 – 8 = 6

3 – 0 = 3

b. Nakato bought 35 books. She gave away 16 books. How many remained?

	3 5	books
-	1 6	books
	1 9	books

Activity:

1. Find the difference of 18 and 9.
2. Chiko had 26 mangoes. Tamale took 7 of them. How many mangoes remained?
3. Take away 17 bananas from 32 bananas.
4. Kemigisha had 30 goats. He gave 22 goats to Nyamutoto. How many remained?
5. Jane had 63 bottle. 25 bottles broke. How many remained?

Horizontal multiplication by 6:

a. 1 x 6 = 6
   6
b. 2 x 6 = 12
   6 + 6
c. 3 x 6 = 18
   6 + 6 + 6

Activity:

1 x 6 =	4 x 6 =	7 x 6 =	10 x 6 =
2 x 6 =	5 x 6 =	8 x 6 =	11 x 6 =
3 x 6 =	6 x 6 =	9 x 6 =	12 x 6 =

Vertical multiplication by 6:

Example I:

```
  1 0
x   6
-----
  6 0
```

0 x 6 = 0

1 x 6 = 6

Example II:

```
  1 4
x   6
-----
  8 4
```

6 x 4 = 24

6 x 1 = 6 + 2

= 10

Activity:

1.
```
  5 0
x   6
-----
```

2.
```
  3 4
x   6
-----
```

3.
```
  7 1
x   6
-----
```

6.
```
  5 1
x   6
-----
```

7.
```
  6 0
x   6
-----
```

8.
```
  8 0
x   6
-----
```

4. 1 2
   x 6
   ____

9. 1 3
   x 6
   ____

5. 1 4
   x 6
   ____

10. 4 0
    x 6
    ____

Word problems:

There are 6 chairs to each table. How many chairs are there to 2 tables.

2

x 6

12 chairs

If one packet has 6 pencils, how many pencils are there in 15 packets?

1 5

x 6

9 0 pencils

5 x 6 = 30

1 x 6 = 6 + 3

=9

Activity:

1. There are 6 rulers in each packet. How many rulers are there in 14 packets?
2. There are 6 books on each shelf. Hoe many books are there on 10 shelves?
3. If there are 6 beads in each string, how many beads are there on 20 strings?
4. If there are 6 girls in each class. How many girls are there in 31 classes?
5. If there are 6 bananas on each cluster. How many bananas are there on 10 cluster?

Multiplying by 7

a. 1 x 7 =7
   7
b. 2 x 7 = 14
   7 + 7
c. 3 x 7 = 21
   7 + 7 + 7

Activity:

1 x 7 =	5 x 7 =	9 x 7 =
2 x 7 =	6 x 7 =	10 x 7 =
3 x 7 =	7 x 7 =	11 x 7 =
4 x 7 =	8 x 7 =	12 x 7 =

Vertical multiplication:

Example I:

```
  1 1      1 x 7 = 7
  x 7      1 x 7 = 7
  ---
  7 7
  ---
```

Example II:

```
  1 2      2 x 7 = 14
  x 7      1 x 7 = 7 + 1
  ---
  8 4          = 8
  ---
```

Activity:

1.
```
  1 3
  x 7
  ---
```

2.
```
  1 5
  x 7
  ---
```

3.
```
  1 7
  x 7
  ---
```

4.
```
  2 1
  x 7
  ---
```

6.
```
  1 4
  x 7
  ---
```

7.
```
  1 6
  x 7
  ---
```

8.
```
  1 8
  x 7
  ---
```

9.
```
  2 0
  x 7
  ---
```

5. 2 2
    x 7
    ____

Multiplication by 8:

Horizontal multiplication:

a. 1 x 8 = 8
   8
b. 3 x 8 = 24
   8 + 8 + 8
c. 2 x 8 = 16
   8 + 8

Activity:

1 x 8 =	4 x 8 =	7 x 8 =	10 x 8 =
2 x 8 =	5 x 8 =	8 x 8 =	11 x 8 =
3 x 8 =	6 x 8 =	9 x 8 =	12 x 8 =

Vertical multiplication by 8:

Example I:

  1 0
x 8
  8 0

Example II:

  1 2
x 8
  9 6

Activity:

1. 1 3
    x 8
    ____

2. 2 0
    x 8
    ____

6. 1 4
   x 8
   ____

7. 2 1
   x 8
   ____

3. 2 2
x 8
_____

8. 1 5
x 8
_____

4. 1 6
x 8
_____

9. 1 7
x 8
_____

5. 2 3
x 8
_____

10. 2 4
x 8
_____

Horizontal multiplication by 9:

a. 0 x 9 = 0

b. 2 x 9 = 18
9 + 9

c. 1 x 9 = 9
9

Activity:

1 x 9 =	4 x 9 =	7 x 9 =	10 x9 =
2 x 9 =	5 x 9 =	8 x 9 =	11 x 9 =
3 x 9 =	6 x 9 =	9 x 9 =	12 x 9 =

Vertical multiplication by 8:

Example I:

1 1
x 9
9 9

Example II:

1 2
x 9
9 6

Activity:

1. 1 3 x 9 = _____

2. 2 0 x 9 = _____

3. 2 2 x 9 = _____

4. 1 6 x 9 = _____

6. 1 4 x 9 = _____

7. 2 1 x 9 = _____

8. 1 5 x 9 = _____

9. 1 7 x 9 = _____

Horizontal multiplication by 9:

a. 0 x 10 = 0

b. 2 x 10 = 20
10 + 10

c. 1 x 10 = 10
10

Activity:

1. 0 x 10 =
2. 1 x 10 =
3. 2 x 10 =
4. 3 x 10 =
5. 4 x 10 =
6. 5 x 10 =
7. 6 x 10 =
8. 7 x 10 =
9. 8 x 10 =
10. 9 x 10 =
11. 10 x10 =
12. 11 x 10 =
13. 12 x 10 =

Vertical multiplication:

a. 1 0 x 0 = 0 0

b. 1 0 x 2 = 2 0

c. 1 0 x 1 = 1 0

Activity:

1. 10 x 3 = _____

2. 10 x 5 = _____

3. 10 x 7 = _____

4. 10 x 7 = _____

6. 10 x 4 = _____

7. 10 x 6 = _____

8. 10 x 8 = _____

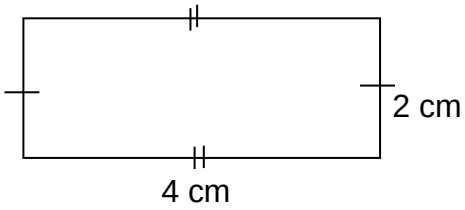
Perimeter:

Perimeter is the total distance round the figure.

Perimeter of a rectangle = S + S + S + S

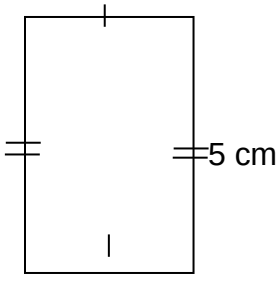
Find the total distance round the rectangles below.

a.



P = S + S + S + S
P = (4 cm + 2 cm) + (4 cm + 2 cm)
P = 6 cm + 6 cm
P = 12 cm.

b.

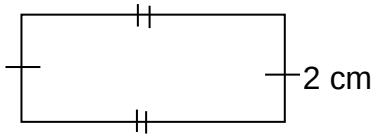


P = S + S + S + S
P = (5 cm + 3 cm) + (5 cm + 3 cm)
P = 8 cm + 8 cm
P = 16 cm.

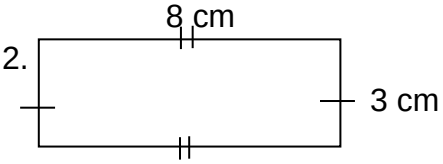
Activity:

Find the perimeter.

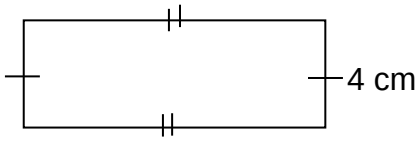
1.



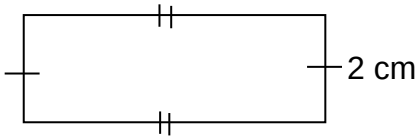
2.



3.



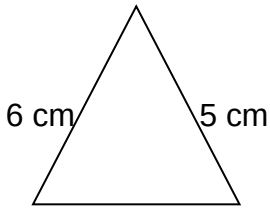
4.



Perimeter of a triangle:

P = S + S + S

Example I:



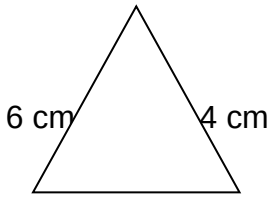
P = S + S + S

P = (6 cm + 5 cm) + 4 cm

P=11cm + 4cm

P = 15 cm

Example II:



P = S + S + S

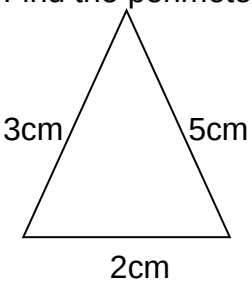
P = (6 cm + 6 cm) + 4 cm

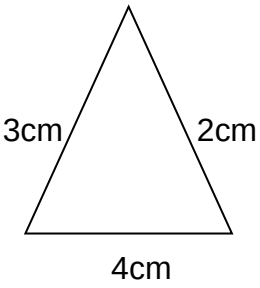
P=12cm+4cm

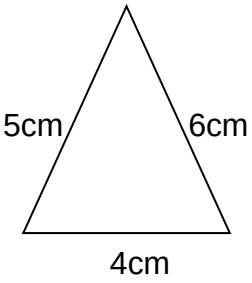
P = 15 cm

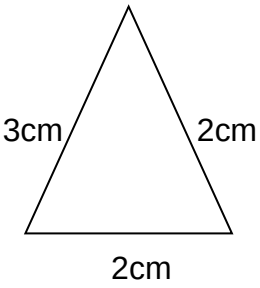
Activity:

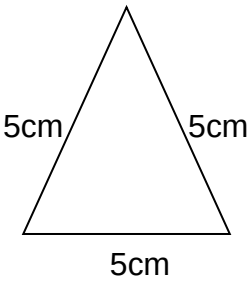
Find the perimeter.





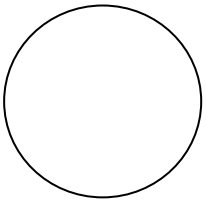




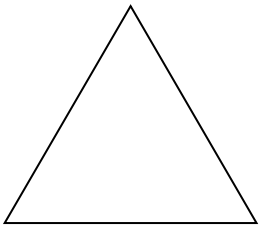


GEOMETRY:

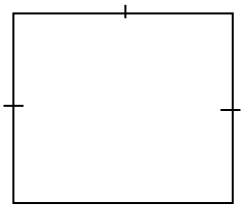
Naming shapes:



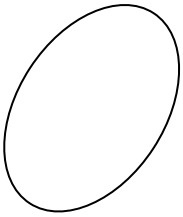
Circle



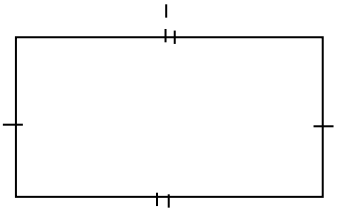
Triangle



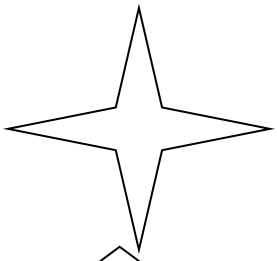
Square



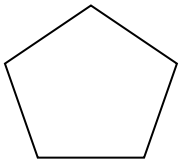
Oval



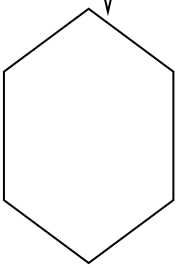
Rectangle



star



Pentagon



Hexagon

Properties of shapes:

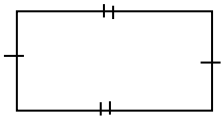
Tri – means three

Angle – is a formed when two lines meet.

A triangle has 3 sides 

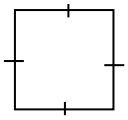
Rectangle.

- It has 4 sides.
- Two opposite sides are equal.



Square.

- It has 4 equal sides.

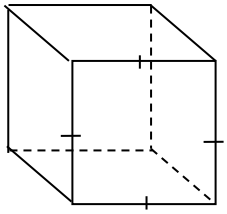


Activity:

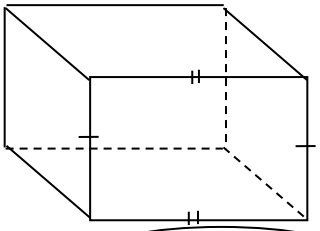
Match numbers of sides to the shapes.

Three sides	Square
Two opposite sides equal	Triangle
Four equal sides	Rectangle

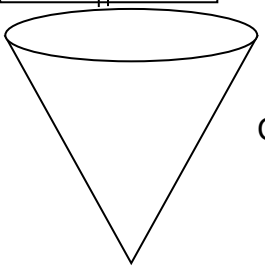
Solid shapes:



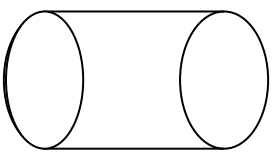
Cube



Cuboid

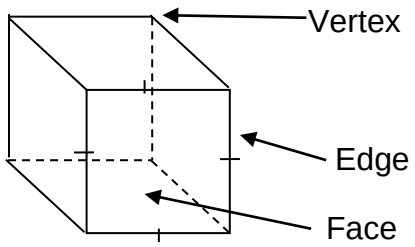


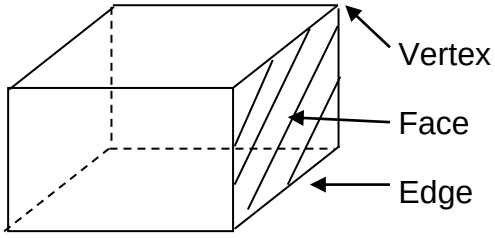
Cone



Cylinder

Parts of a cube/cuboid:

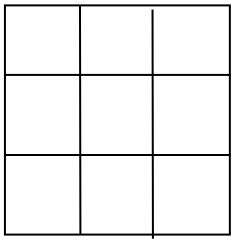




Finding Area of a square:

Area is the space covered by a flat object.

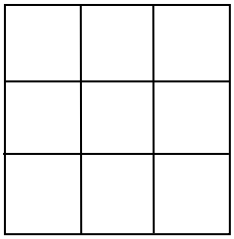
Method I. (by counting squares)



Area = 9 squares

units.

Method II (by multiplying)

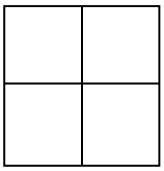


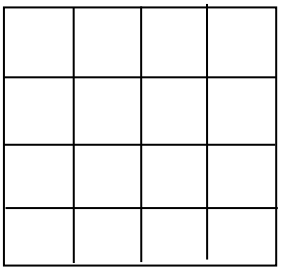
A = S x S

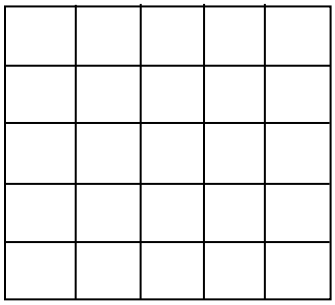
A = 3 x 3

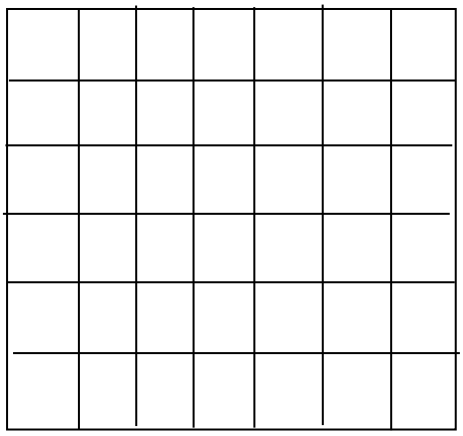
A = 9 square units

Activity:

1. 

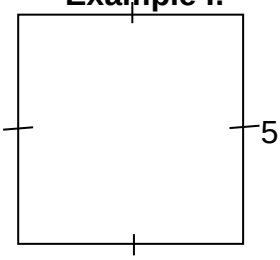
2. 

3. 

4. 

Multiplying the length of 2 sides:

Example I:

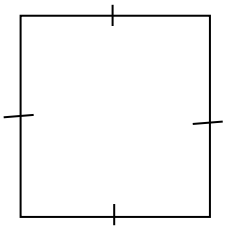


A = S x S

A = 5 cm x 5 cm

A = 25 cm^2

Example II:



A = S x S

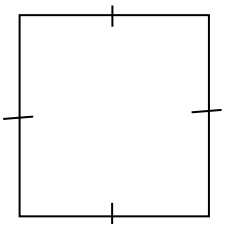
A = 2 cm x 2 cm

A = 4 cm^2

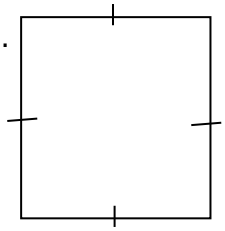
Activity:

Find the area of the squares below

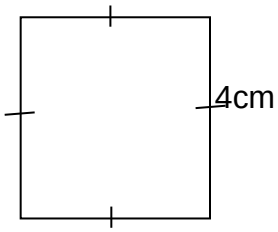
a.



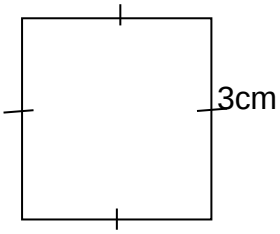
c.



b.



d.

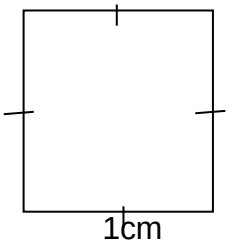


Finding perimeter of a square:

What is perimeter?

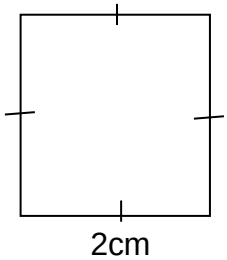
Perimeter is the total distance round the figure.

a.



P = S + S + S + S
P = (1cm + 1cm)
+ (1cm + 1cm)
P = 2cm + 2cm
P = 4 cm

b.

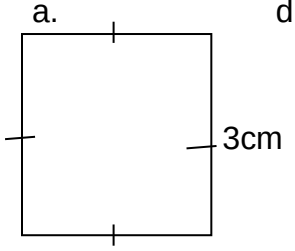


P = S + S + S + S
P = (2cm + 2cm)
+ (2cm + 2cm)
P = 4cm + 4cm
P = 8cm

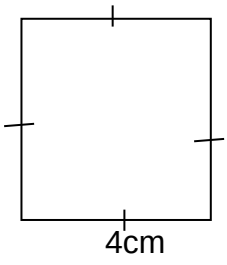
Activity:

Find the distance round the figure.

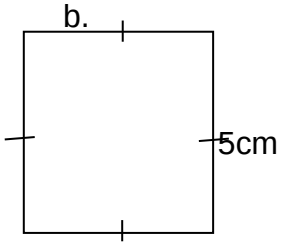
a.



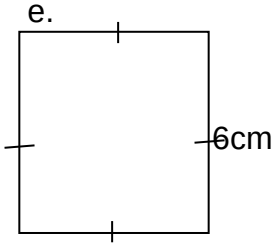
d.



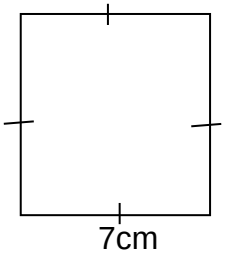
b.



e.

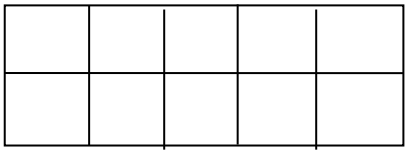


c.



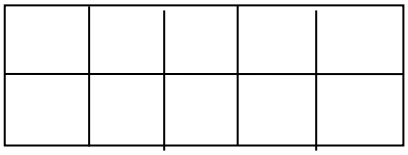
Finding area of a rectangle:

Example I:



A = 10 square units

OR:



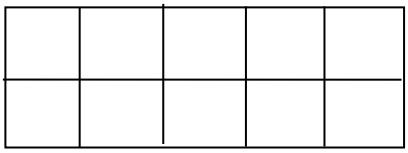
A= L x W

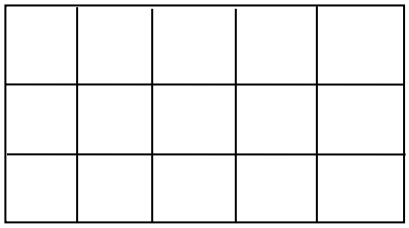
A = 5 x 2

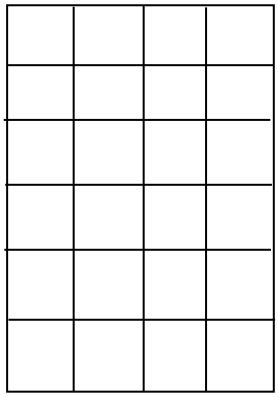
A = 10 square units

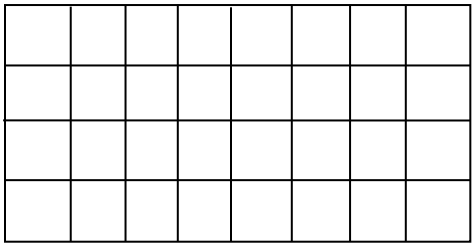
Activity:

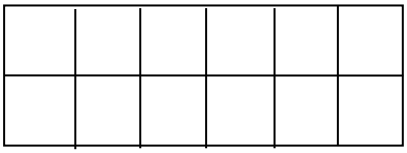
Find the area of the rectangles below.

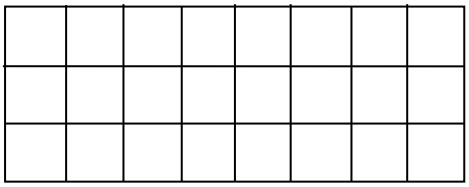
a. 

b. 

c. 

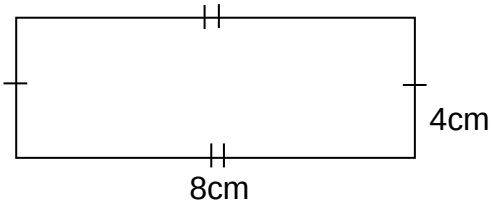
d. 

e. 

f. 

Finding area of a rectangle by multiplying length by width:

Example I:

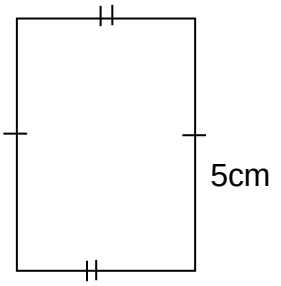


A = L x W

A = 8cm x 4cm

A = 32 cm^2

Example II:



A = L x W

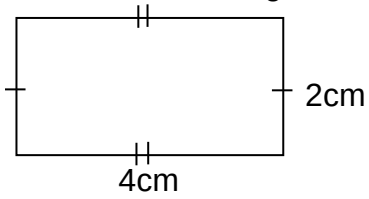
A = 5cm x 2cm

A = 10 cm^2

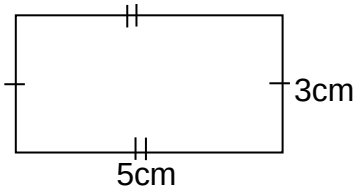
Activity:

Find the area of the rectangles

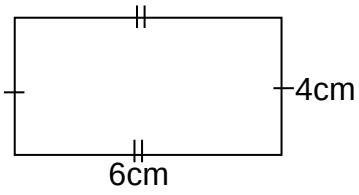
a.



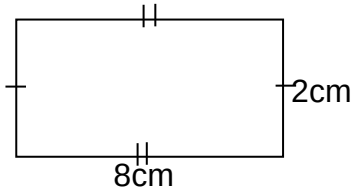
b.



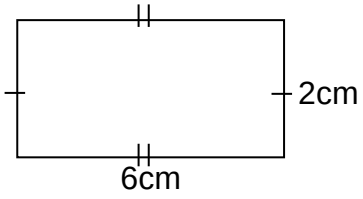
c.



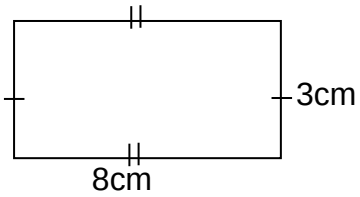
d.



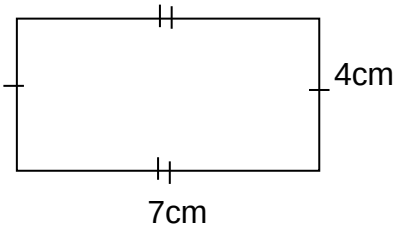
e.



f.



Finding perimeter of a rectangle:

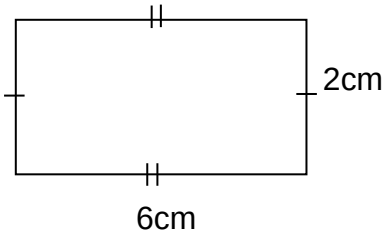


P = (7cm + 4cm) + (7cm + 4cm)

P = 11cm + 11cm

P = 22cm

Example II:



P = L + W + L + W

P + (6cm + 2cm) + (6cm + 2cm)

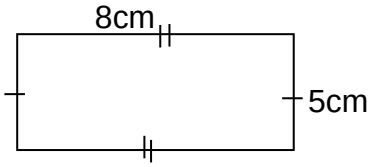
P = 8cm + 8cm

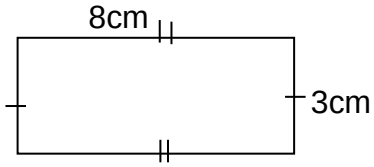
P = 16cm

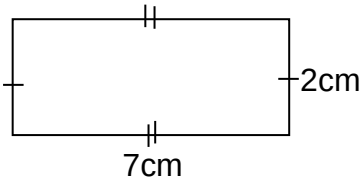
Activity:

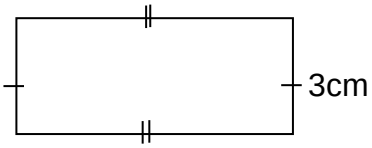
Find the distance round these figures.

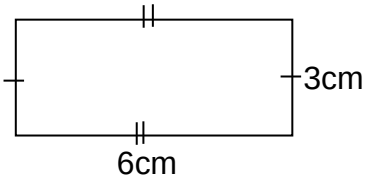
a.



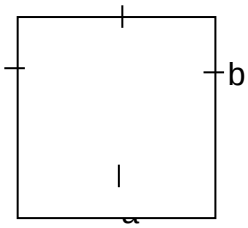
b. 

c. 

d. 

e. 

Measuring length of sides a square in cm using a ruler.

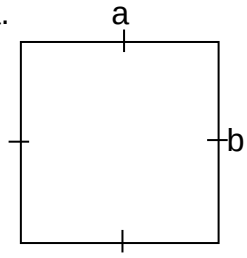


a = 2.5cm

b = 2.5cm

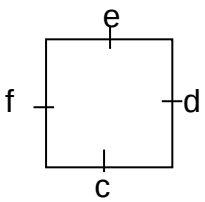
activity:

Measure the length of named sides.

a. 

a =

b =

b. 

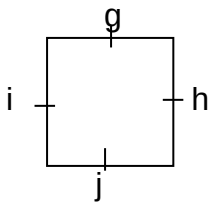
c =

d =

e =

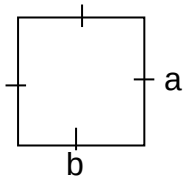
f =

c.



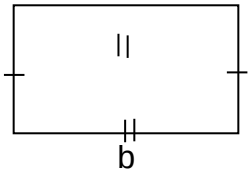
g =
h =
i =
j =

d.



a =
b =

Measuring length and width of rectangles using a ruler.

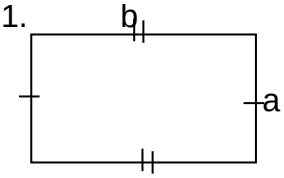


a = 3cm

b = 5cm

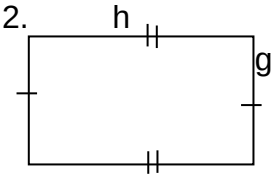
Activity:

1.



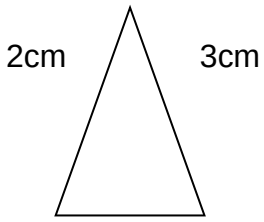
a =
b =

2.



g =
h =

Measuring distance round the triangle:

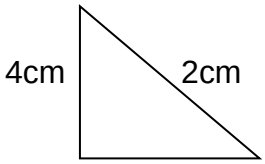


P = S + S + S

P = (4cm + 3cm) + 2cm

P = 7cm + 2cm

P = 9cm.



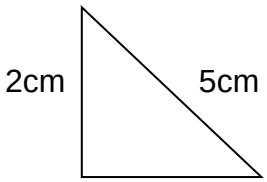
P = S + S + S

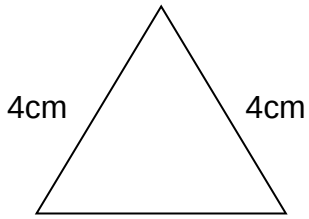
P = (6cm + 4cm) + 2cm

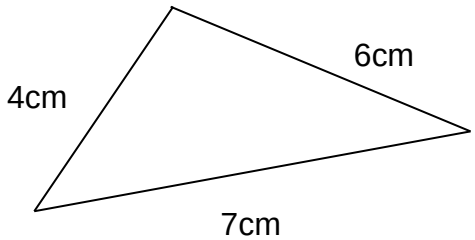
P = 10 cm + 2 cm

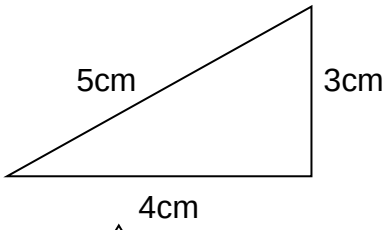
P = 12cm

Activity:

1. 

2. 

3. 

4. 

5.