Script Code	v22cb09ma0802_sc
Screenplay Status	TL Review
Title	Types of Quadrilaterals
Grade	9
Writer	Virender Kumar
TL	Midhilesh Pillai
SME	Bela Arora
Editor **Creative Director** **Final Sign-off** **Mini Takeaway** **Key Takeaway**	Manish Joshi Ninad Dilip Mohite Vishnu Dev - Trapezium - Parallelogram - Rectangle - Rhombus - Square - Kite Types of Quadrilaterals
Research Doc.	Link
Pitch Doc.	Link
Word Count	1251
Presenter	Aashay Chandrakant Mane
Characters	Presenter
Locations	STUDIO

Presenter Outfit	Smart Casual
Props	Not required

Sub strand	Geometry III

SCENE:1
INT. DRAWING ROOM - AFTERNOON

INSERT MOG: Presenter enters the frame, with a four sided figures on the wall made out of nails hammered on the wall and colorful thread wrapped around it, (ref)

PRESENTER
Oh hey everyone! My niece just learnt about different types of shapes with the help of a geoboard.
(beat)
she learnt to make different types of shapes with the help of nails and colorful threads like this…
(beat)
and now she's asking me to decorate an empty wall with the same.
(beat)
Though these figures look different from each other,
(beat)
there's a basic property common between all of them.

In cue with "Have a look…" highlight a trapezium shaped figure engraved with nails and thread on the wall.(ref)

PRESENTER
Have a look at this figure,

On cue with “or this one…” the other shapes like rectangle, square and rhombus get highlighted individually using emphasis effect.(ref)

PRESENTER
or this one, or this one.
(beat)
…they all have four sides.

Retain the previous MoG and on cue with “Correct!...” add the title “Quadrilateral” appears below the animation.

PRESENTER
So, what do we call such figures?
(beat)

These are called

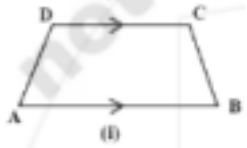
quadrilaterals.
(beat)
But, if all such figures are called quadrilaterals, how would we differentiate between them?
(beat)
Well that's why I'm here.
Let's learn about different types of quadrilaterals.

INSERT ENDS.

FSA(SECTION CARD): "Types of quadrilaterals" (ref)
FSA ENDS.

BG: Teaching background begins here.

SCENE:2
INSERT MoG: On cue with "Have a look at this…" add the following figure beside the presenter.**(ref)**



PRESENTER
Have a look at this quadrilateral ABCD.

On cue with "…that is…" highlight side AB and DC along with the arrows in the figure.

PRESENTER
Here, only one pair of opposite sides, that is, sides AB and DC, are parallel

to each other.

(beat)

Can you recall what we call such a figure?

Retain the previous MoG and on cue with “Yes! It is…” add a title “Trapezium” and the following TOS beside the presenter.(ref)

PRESENTER

Yes! It is a trapezium.

(beat)

A quadrilateral having one pair of opposite sides parallel to each other is called a trapezium.[ref]

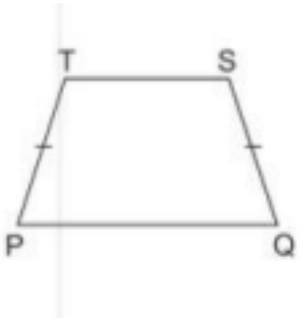
TOS:

- A quadrilateral having one pair of opposite sides parallel to each other is called a trapezium.

INSERT ENDS.

INSERT MoG:

On cue with "Look at this…" add the following image along with the single stroke as shown below, and on cue with "What do you observe…" highlight side PT and QS along with the single stroke as shown below. Please note that we need to show two arrows in the figure below. One on side TS and another on side PQ, just like how it is shown in the previous figure.



PRESENTER
Now, look at this trapezium PQST.
(beat)
What do you observe about the non-parallel sides, PT and QS?
(beat)
Yes, they are equal.

On cue with " …trapezium known as…" add the label "Isosceles Trapezium".

PRESENTER
So, quadrilateral PQST is a special type of trapezium known as isosceles trapezium.

On cue with "In

general…" add the following TOS.

PRESENTER
In general, if the two non-parallel sides of a trapezium are equal, then it is called an isosceles trapezium.[RS Aggarwal 9]

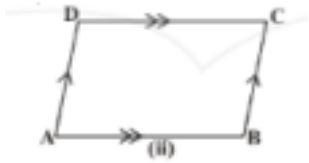
TOS: If the two non parallel sides of a trapezium are equal, then it is called an isosceles trapezium.

PRESENTER
As we know, not all four-sided figures look like this;

SCENE:3

INSERT MoG:

Retain the previous MoG and on cue with "some will appear…" add the following image beside the presenter.(ref)



PRESENTER
some will appear like this.

Retain the image and on cue with "…side AB is parallel…" highlight the pairs AB and DC, and AD and BC using arrows.

PRESENTER
In this quadrilateral ABCD, side AB is parallel to side DC and…
(beat)
…side AD is parallel to side BC.

(beat)
So in quadrilateral ABCD, two pairs of opposite sides are parallel to each other

Retain the previous MoG and on cue with "Correct! It is a…" add the heading "Parallelogram" and the following TOS beside the presenter.(ref)

PRESENTER
What do we call this figure?
(beat)
Correct! It is a parallelogram.
(beat)
This means if in a quadrilateral, two pairs of opposite sides are parallel to each other, then it is a parallelogram.[RS Aggarwal 9]

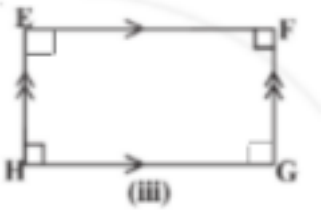
TOS:
In a quadrilateral, if two pairs of opposite sides are parallel to each other, then it is a parallelogram.

INSERT ENDS.

PRESENTER
Let's have a look at another four-sided figure.

SCENE:4

INSERT MOG:
On cue with "This is quadrilateral…" add the following image beside the presenter. And highlight angle E, F, H and G as right angles in the rectangle as shown in the reference.(ref)



PRESENTER
This is quadrilateral EFGH,

Retain the figure and on cue with "The opposite sides…" highlight EF and HG along with the arrows, and on cue with "Similarly, the other pair…" highlight EH and FG with different colors and add arrows.

PRESENTER
The opposite sides of this quadrilateral, EF and HG are parallel to each other.
(beat)
Similarly, the other pair of opposite sides, EH and FG, are also parallel to each other.

Retain the figure and On cue with "What do you observe about…" highlight the angle H in the figure and on cue with "Correct!…" highlight angle H.

PRESENTER
Here, what do you observe about angle H?
(beat)
Correct! Angle H is a right angle.

On cue with "we have…" highlight both the pairs EF and HG, and EH and FG with separate colors and arrows.

PRESENTER
So, in quadrilateral EFGH,
(beat)
we have two pairs of opposite sides

that are parallel to each other and
along with that,

On cue with “We also have…” highlight the ∠E, ∠F, ∠G and ∠H.

PRESENTER
we have each angle that measures ninety degrees.
(beat)
So, what do we call such a quadrilateral?

Retain the figure and on cue with “Correct!…' add the title “Rectangle” and the following TOS beside the presenter.(ref)

PRESENTER
Correct!
(beat)
It is a rectangle.
(beat)
So, we can say that a quadrilateral having two pairs of opposite sides parallel to each other with each angle as a right angle is called a rectangle.
[Modified AP-TS 9ref]

TOS:
A quadrilateral having two pairs of opposite sides parallel to each other with each angle as a right angle is called a rectangle.

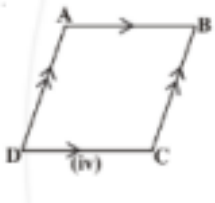
INSERT ENDS.

PRESENTER
Wow! You are getting good at this,
(beat)
So, let me introduce you to another four-sided figure.

SCENE:5

INSERT MoG:

On cue with "Here, look at this…" add the following image and on cue with "In this figure we have…" highlight the sides AB and DC, and AD and BC with different colors using arrows beside the presenter. (ref)



PRESENTER

Here, look at this one.

(beat)

In this figure, we have two pairs of opposite sides, AB and DC as well as AD and BC, parallel to each other.

Retain the previous MoG and on cue with “We also have…”

highlight all the sides with the same color and use single line markings when saying “equal”. (ref)

PRESENTER
We also have all the sides equal to each other.
(beat)
Now, Do you remember the name of such a figure?

On cue with “It is a rhombus…” add the title “Rhombus” and the following TOS.(ref)

PRESENTER
Yes! It is a rhombus!
(beat)
So, a quadrilateral having two pairs of opposite sides parallel and with all sides equal to each other is called a rhombus.[Modified AP-TS 9 Ref]

TOS:
A quadrilateral having two pairs of opposite sides parallel and with all sides equal to each other is called a rhombus.

INSERT ENDS.

SCENE:5

INSERT MoG:

On cue with "But what about this…" add the following image where each angle is shown as a right angle just like angle D and angle B on screen. (ref)

PRESENTER

But what about this one?

(beat)

This is a quadrilateral,

On cue with “In which we have…” highlight the sides AB and DC, and then highlight AD and BC using arrows. And on cue with “Also all the sides…” highlight all the sides with a single stroke on each side.

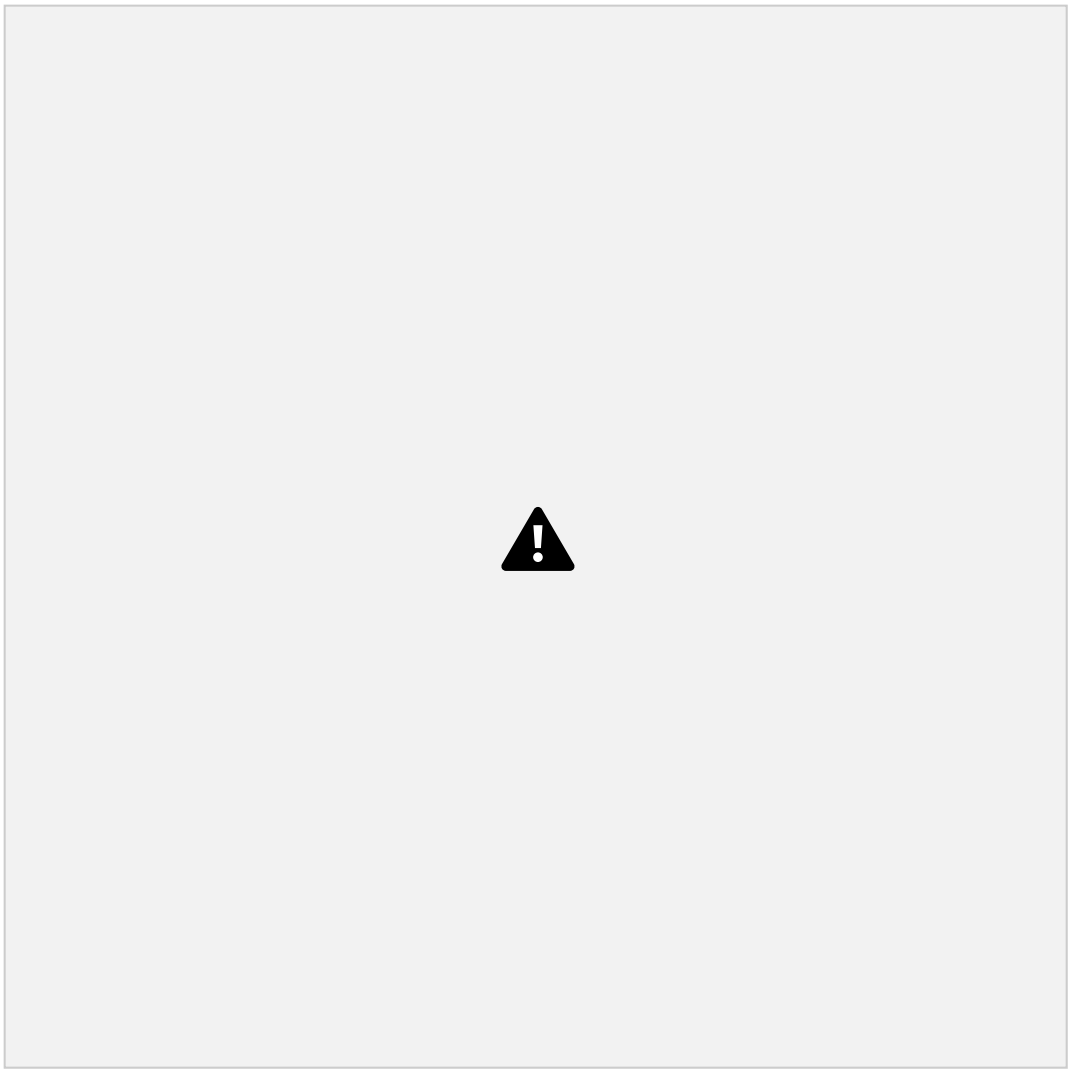
PRESENTER

…in which two pairs of opposite sides
are parallel to each other.
(beat)
Also, all the sides of this
quadrilateral are equal to each other.
(beat)
And if you observe closely,

Retain the previous MoG and on cue with “All the angles…” highlight the angles A, B, C and D.

PRESENTER

…all the angles are of the measure
ninety degrees or we can say they are
right angles.



Retain the previous MoG and on cue with “Yes!…” add the label “Square” over the image and add the following TOS.(ref)

PRESENTER
Can you tell me what is that?
(beat)
Yes!
(beat)
It is a square!
(beat)
So, a quadrilateral having two pairs of opposite sides parallel to each other,
(beat)
with each angle as a right angle, and all sides equal to each other, is

called a Square. [Modified AP-TS 9 Ref]

TOS:
A quadrilateral having two pairs of opposite sides parallel to each other, with each angle as a right angle and all sides equal to each other, is called a square.

INSERT ENDS.

PRESENTER
Now, there's one more four-sided figure,
(beat)
…and its name is quite the same as its shape appears to be.

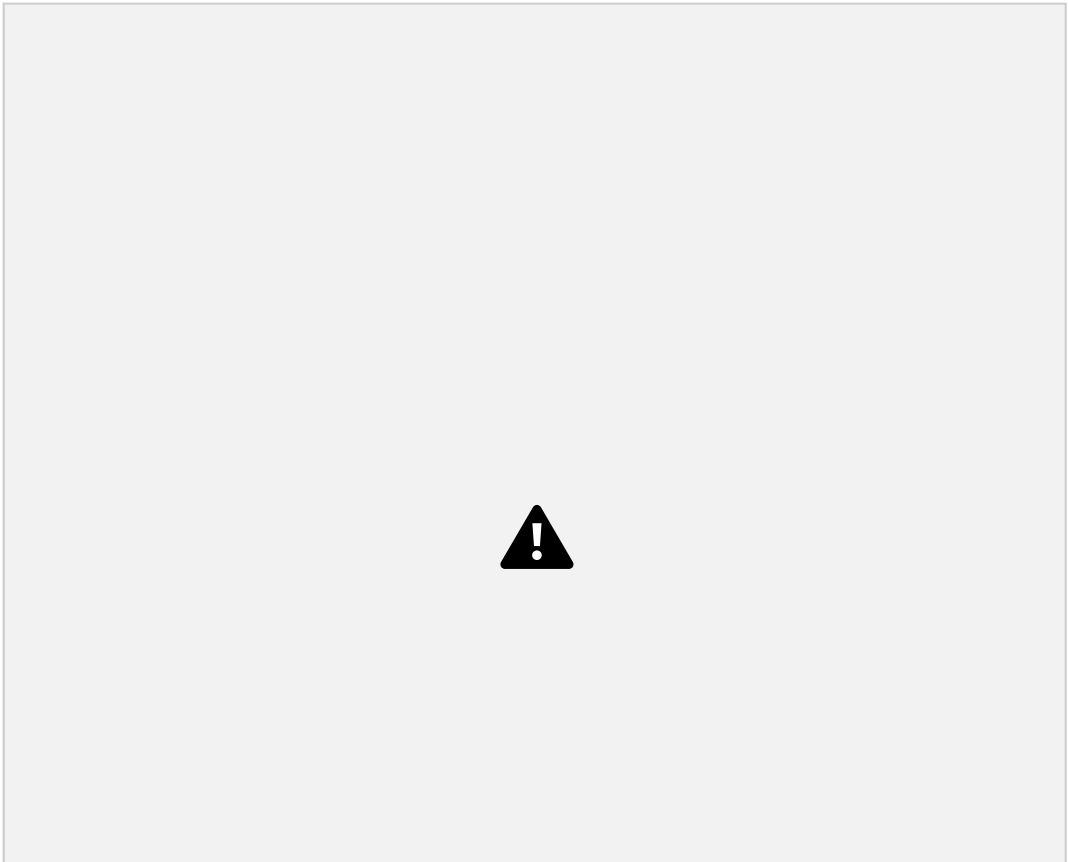
SCENE:6

FSA: On cue with "Have a look at…" add a kid flying a kite.(ref)

PRESENTER(V.O)
Have a look at this figure now,

FSA ENDS.

INSERT MoG:
On cue with "What does…" zoom in on the kite and add the



presenter beside the kite. (ref)

What does it look like?

(beat)

Correct! It looks like a kite.

INSERT ENDS.

SCENE:7

INSERT MoG: On cue with "…adjacent side of this…" add the following image and highlight all the sides AB, BC, CD and AD.(ref)

PRESENTER

Did you observe something about the adjacent sides of this quadrilateral ABCD?

On cue with "That is…" highlight side AB and AD as one pair with single strokes on each side, and then CB and CD on another pair with double strokes on each side.

PRESENTER

Yes! In this quadrilateral, two pairs of adjacent sides are equal,

(beat)

That is, AB is equal to AD and CB is equal to CD.

On cue with "And what about…" highlight AB and DC, and then AD and BC.

PRESENTER

And what about the two pairs of opposite sides?

(beat)

Yes, both the

pairs of opposite sides
of this quadrilateral are not equal,

On cue with "that is, AB is not…" highlight the sides in pair of AB and DC, and then BC and AD

PRESENTER
that is, AB is not equal to DC and BC
is not equal to AD.
(beat)
And what's the name of this figure?

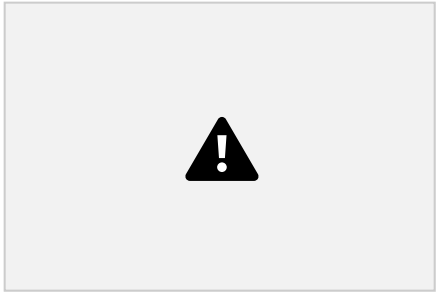
On cue with "It's a kite…" add the title "Kite" add the following TOS. (ref)

PRESENTER
Correct! It's a kite.
(beat)
A quadrilateral is a kite if it has two
pairs of equal adjacent sides and
unequal opposite sides.[RD 9]

TOS:
A quadrilateral is a kite if it has two pairs of equal adjacent sides and unequal opposite sides.

INSERT ENDS.

SCENE:8
INSERT MoG:
ON cue with "…look at this…" add the following image and on cue with "Right!…" add the title "Rectangle". (ref)



PRESENTER
Have a look at this quadrilateral ABCD?
(beat)
What would you call it?
(beat)
Right! It's a rectangle.
(beat)
But let me ask you this. Can we say that it is a parallelogram?
(beat)
Let's see.

On cue with "…the pairs of opposite sides…" highlight two pairs of sides, AB and CD with single arrows, and then BC and AD with the double arrows.

PRESENTER
As in this rectangle, the pairs of opposite sides AB and CD…
(beat)
…and, sides BC and AD are parallel to each other, so we can say that it is also a parallelogram.

On cue with "…in a rectangle…" highlight the angles A, B, C and D and on cue with "Thus, a rectangle…" add the following TOS. (ref)

PRESENTER
We have also seen that, in a rectangle each angle measures 90 degrees.
(beat)
Thus, a rectangle is a parallelogram whose each angle is of the measure 90 degrees.

TOS:
A rectangle is a parallelogram whose each angle is of the measure 90°

On

cue with “Now, have a look at this…” add the following image and on cue with “Look at this…” add the title “Rhombus. Then add the title “Is this a parallelogram?”.(ref)

PRESENTER
Now, have a look at this rhombus EFGH.
(beat)
Is rhombus a parallelogram?
(beat)
Let’s check.

On cue with “the pair of opposite sides…” highlight two pairs of sides, EF and HG, and then EH and FG with the respective arrows.

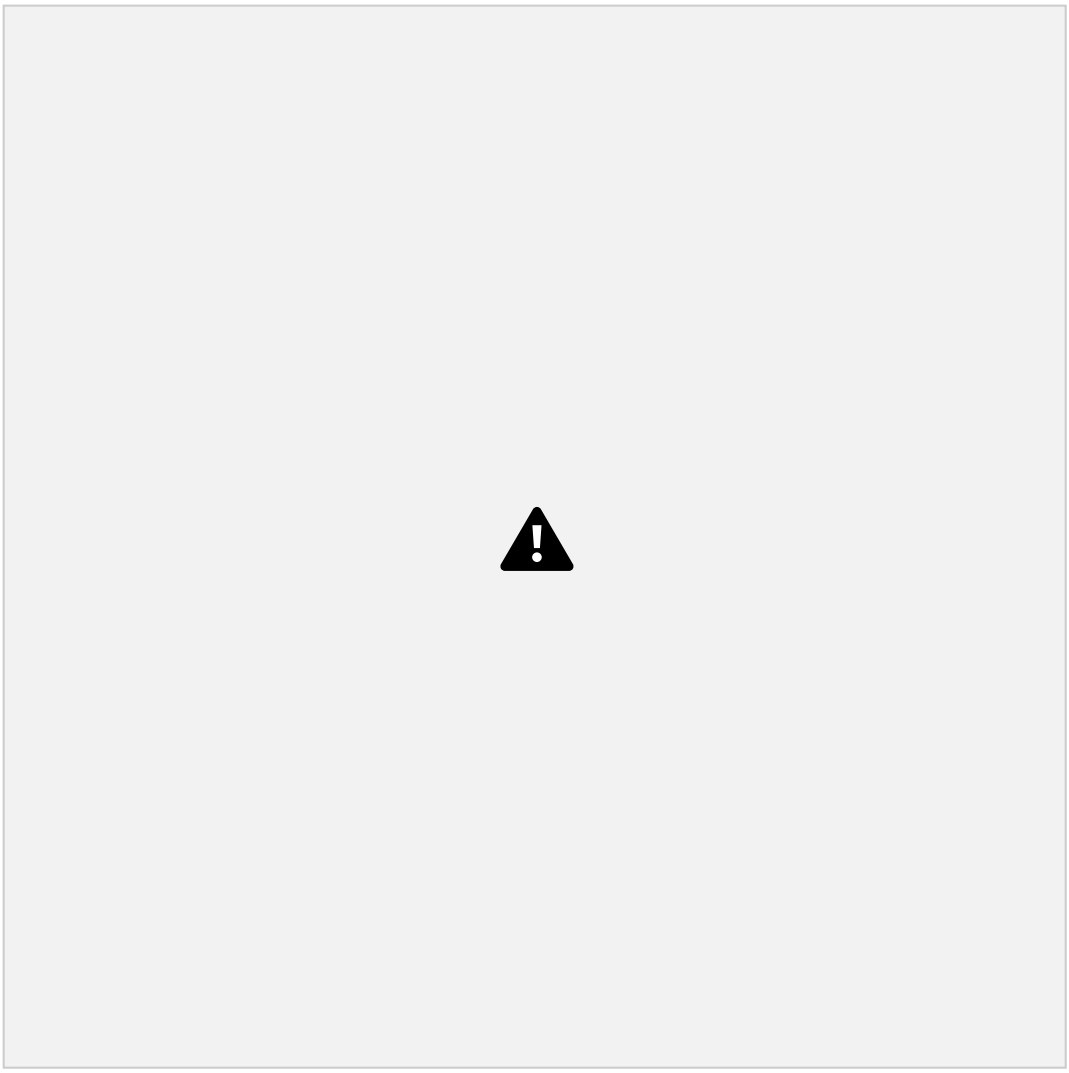
PRESENTER
In this rhombus, the pair of opposite sides EF and HG…
(beat)
…and sides EH and FG are parallel to each other,
(beat)
which makes it a parallelogram.
(beat)
And we know that all the sides of a rhombus are equal to each other.

On cue with “Hence we can say that…” add the following TOS.(ref)

PRESENTER
Hence, we can say that a rhombus is a parallelogram in which all the sides are equal to each other.

TOS:

A rhombus is a parallelogram in which all the sides are equal to each



other.

On cue with “Let’s have a look…” add the following image and on cue with “…all sides are…” highlight all the sides of the figure and the angle as right angle. (ref)

PRESENTER
Now, Let’s have a look at this square MNOP.
(beat)
Would you call it a parallelogram?

On cue with “…the pairs of opposite sides…” highlight the sides MN and PO with their respective single arrows, and then MP and NO with double arrows.

PRESENTER
In this square, the pairs of opposite sides MN and PO…
(beat)
…and sides MP and NO are parallel to each other, which makes it a parallelogram.

On cue with “As we know…” highlight all the sides with single strokes and on cue with “…and each angle…”highlight all the angles as right angles.

PRESENTER
As we know, in a square, all the sides are equal to each other…
(beat)

…and each angle measures ninety degrees.

On cue with “Hence, we can say that…” add the following TOS. (ref)

PRESENTER
Hence, we can say that a square is a parallelogram whose all sides are equal to each other and each angle is a right angle.

TOS:
A square is a parallelogram whose all sides are equal to each other and each angle is a right angle.

INSERT ENDS.

SCENE:9
FSA (Summary): (ref)

PRESENTER
That’s all for now.
(beat)
So, let’s summarize what we have learnt so far.
(beat)
A quadrilateral having one pair of opposite sides parallel to each other is called a Trapezium.
(beat)
If the two non-parallel sides of a trapezium are equal, then it is called an isosceles trapezium.
(beat)
In a quadrilateral, if two pairs of opposite sides are parallel to each other, then it is a parallelogram..
(beat)

A quadrilateral having two

pairs of
opposite sides parallel to each other
with each angle as a right angle, is
called a rectangle.
(beat)
A quadrilateral having two pairs of
opposite sides parallel and with all
sides equal to each other is called a
rhombus.
(beat)
A quadrilateral having two pairs of
opposite sides parallel to each other
with each angle as a right angle, and
all sides equal to each other is called
a square.
(beat)
Rectangle, rhombus, and square are all
parallelograms.
(beat)
A quadrilateral is a kite if it has two
pairs of equal adjacent sides and
unequal opposite sides.

TOS:

- A quadrilateral having one pair of opposite sides parallel to each other is called a trapezium.
- If the two non-parallel sides of a trapezium are equal, then it is called an isosceles trapezium.
- In a quadrilateral, if two pairs of opposite sides are parallel to each other, then it is a parallelogram.
- A quadrilateral having two pairs of opposite sides parallel to each other with each angle as a right angle is called a rectangle.
- A quadrilateral having two pairs of opposite sides parallel and with all sides equal to each other is called a rhombus.
- A quadrilateral having two pairs of opposite sides parallel to each other with each angle as a right angle and all

sides equal to each other is called a square.

- Rectangle, rhombus, and square are all parallelograms.
- A quadrilateral is a kite if it has two pairs of equal adjacent sides and unequal opposite sides.

On cue with “Now that we’re done with…” add the family tree of quadrilaterals. (ref)

PRESENTER

Now that we’re done with understanding different types of quadrilaterals,

(beat)

Would you want to know what properties they follow?

(beat)

Well, watch our next video to find out…