



Report 1 of 2 on:

Angles & Polygons

18 September 2017 → 29 September 2018

Tilly Flaming

Teacher

Ms Rasdell

Year

11

Tilly's Performance

Topic Performance

40%

Here is Tilly's performance! This score shows the percentage of questions that she answered correctly in Quiz A.

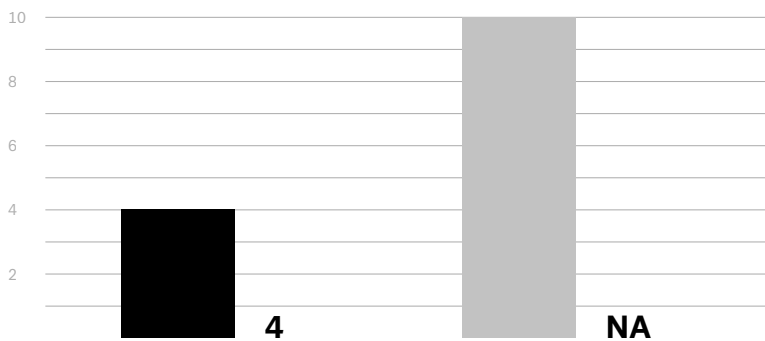
The "Expected score" is what we thought Tilly would get, based on how well she did in previous topics.

62%

Expected score

Areas to improve

6



Quiz A
25 Nov 2017

Assigned immediately after a topic is completed to understand what a student has learnt and where misunderstandings lie.

Quiz B
11 Nov 2017

Assigned 3 weeks after a topic is completed to test what a student recalls and whether misunderstandings still exist or have reoccurred.

Tilly's Explanations & Feedback

Questions from Quiz A

Below is a quick overview of how Tilly did in Quiz A.
You can find more detailed information on each question in the following pages.

	Sub topic	Quiz A
1	Angles in triangles	✗
2	Angles in polygons	✓
3	Angles in triangles	✓
4	Angle Facts with Parallel lines	✗
5	Quadrilaterals	✗
6	Angles in polygons	✓
7	Polygons	✗
8	Angles in polygons	✗
9	Angles in polygons	✓
10	Angles in polygons	✗

Tip

Where your child hasn't provided an explanation, encourage him to explain his choice by using the model explanation and the teacher feedback.

Question No.

1

edexcel

Find the size of the angle marked x .
ABD is a straight line

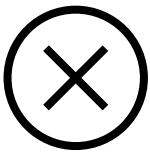
A 75° 82° C

NOT TO SCALE

A B C D

23° 75° 157° 82°

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Tilly chose

D

Tilly's explanation:
"It is a Z-angle"

Tilly's misunderstanding:
The student may be thinking of alternate angles, but these lines are not parallel.

Correct answer

C

Ms Rasdell's feedback:
"No quite, Tilly. I have sent you some examples to look at and a worksheet to complete. Once you have finished them, give the follow-up question a go - if you're still stuck come and see me."

Eedi's explanation:
Angles in a triangle add up to 180° . This tells you the angle ABC is 13° . Angles on a straight line add up to 180° , so $x = 157^\circ$

Recommended actions

Angles in a Triangles
By Oxford University Press
eedi.co.uk/VD-1634

Angle Geometry
By Oxford University Press
eedi.co.uk/DC-8176

Angles in a Triangle
By Oxford University Press
eedi.co.uk/WK-9864



Watched? (6min)



Read? (20min)



Completed? (14min)

Question No.

2

edexcel

115° x°

89° 68°

Find the size of the angle marked x .

!! NOT TO SCALE !!

A B C D

91° 88° 115° 85°

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Tilly chose

B

Tilly's explanation:
"They all add up to 360"

Correct answer

B

Eedi's explanation:
The interior angles of any quadrilateral add up to 360°. If you add up the 3 given angles, you get 272°, so x must be 88°

Recommended actions

Angles in Quadrilaterals
By Oxford University Press
eedi.co.uk/VD-8273

Angle Geometry
By Oxford University Press
eedi.co.uk/DC-8127

Angles in a Quadrilateral
By Oxford University Press
eedi.co.uk/WK-6435

Watched? (7min)

Read? (2min)

Completed? (18min)

Question No.

3

edexcel

Find the size of the angle marked x.

A 44° B 180° C 68° D 112°

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Tilly chose

C

Tilly's explanation:
"They are the same"

Correct answer

C

Ms Rasdell's feedback:
"Well done! You chose the correct answer. Next time please include more information for example - the type of triangle in this question. This will allow me fully check your understanding."

Eedi's explanation:
The dashed lines indicate that this triangle is an isosceles. Base angles are the same, so x must be 68°

Recommended actions

Angles in a Triangles
By Oxford University Press
eedi.co.uk/VD-2736

Angle Geometry
By Oxford University Press
eedi.co.uk/DC-3627

Angles in a Triangle
By Oxford University Press
eedi.co.uk/WK-8573

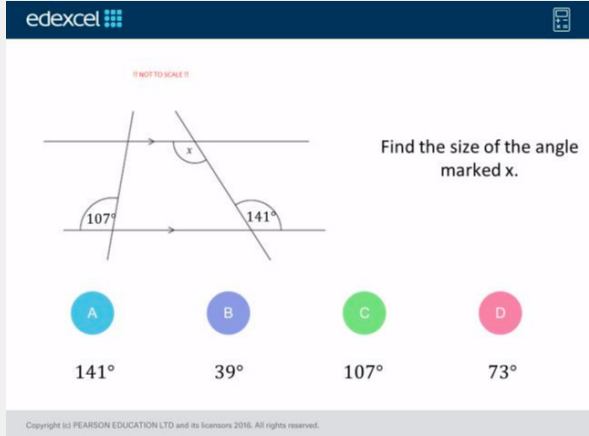
Watched? (4min)

Read? (23min)

Completed? (14min)

Question No.

4

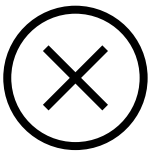


edexcel

Find the size of the angle marked x .

A 141° B 39° C 107° D 73°

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Tilly chose

D

Tilly's misunderstanding:

The student may have found the bottom left angle of the quadrilateral, and may think opposite angles in a quadrilateral are equal.

Correct answer

A

Eedi's explanation:

Alternate angles (sometimes known as "Z-angles") are equal. This angle is alternate to the one marked 141°

Recommended actions

Angles in Parallel Lines
By Oxford University Press
eedi.co.uk/DC-1948

Angle Geometry
By Oxford University Press
eedi.co.uk/DC-1948

Angles in a Triangle
By Oxford University Press
eedi.co.uk/WK-0973

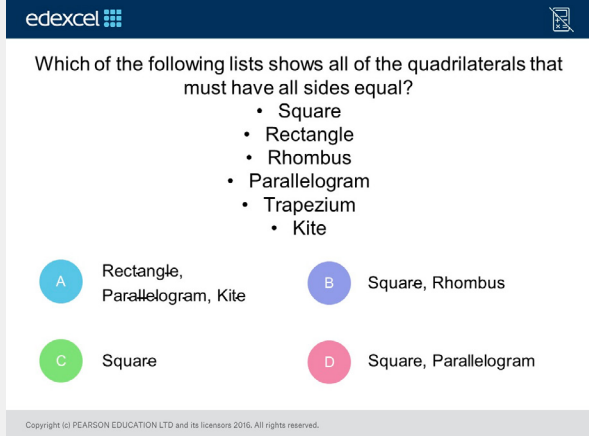
Watched? (5min)

Read? (23min)

Completed? (19min)

Question No.

5



edexcel

Which of the following lists shows all of the quadrilaterals that must have all sides equal?

- Square
- Rectangle
- Rhombus
- Parallelogram
- Trapezium
- Kite

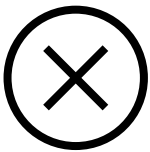
A Rectangle, Parallelogram, Kite

B Square, Rhombus

C Square

D Square, Parallelogram

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Tilly chose

A

Tilly's explanation:
"I just guessed"

Tilly's misunderstanding:
The student may have misread the question and given the ones with only some sides equal.

Correct answer

B

Eedi's explanation:
All the sides on both a square and a rhombus must be equal. That is not true of any of the other quadrilaterals. Sometimes all the sides may be the same, but they do not have to be.

Recommended actions

2D Shapes: Quadrilaterals
By Oxford University Press
eedi.co.uk/VD-5873

Properties of Quadrilaterals
By Oxford University Press
eedi.co.uk/DC-8102

2D Shapes: Quadrilaterals
By Oxford University Press
eedi.co.uk/WK-1872

Watched? (3min)

Read? (6min)

Completed? (10min)

Question No.

6

edexcel

Find the size of the angle marked x .

97° 108°
212°
75° x°

NOT TO SCALE!

A 72° B 48° C 225° D 75°

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Tilly chose

B

Tilly's explanation:

"It all adds up to 540, and then I worked it out from there"

Correct answer

B

Ms Rasdell's feedback:

"Great work!"

Eedi's explanation:

Total interior angles in a pentagon add up to 540°. If you add up all the given angles you get 492°, so the missing angle must be 48°

Recommended actions

Angles in Polygons

By Oxford University Press
eedi.co.uk/DC-7942

Watched? (10min)

Angle Properties of Polygons

By Oxford University Press
eedi.co.uk/DC-0933

Read? (7 min)

Angles in Polygons

By Oxford University Press
eedi.co.uk/WK-0138

Completed? (18min)

Question No.

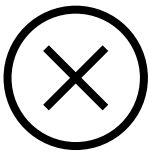
7

edexcel

Which of these is the best definition of the word 'regular'?

- A At least two angles are equal.
- B All angles are equal. All sides are the same length.
- C At least two of the side lengths are equal.
- D At least two angles are not equal and at least two sides are not equal.

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Tilly chose

A

Tilly's explanation:

"A square is regular and two of the sides are equal there."

Tilly's misunderstanding:

The student may not know that all angles must be equal

Correct answer

B

Ms Rasdell's feedback:

"When answering questions like this try to picture the shapes. Here we are picturing regular shapes, eg. a regular hexagon which has 6 equal sides and 6 equal angles, similarly a square has 4 equal angles and 4 equal sides."

Eedi's explanation:

In regular polygons, all angles are equal, and all sides are the same length

Recommended actions

Angles in Polygons
By Oxford University Press
eedi.co.uk/VD-9823

Angle Properties of Polygons
By Oxford University Press
eedi.co.uk/DC-7953

Angles in Polygons
By Oxford University Press
eedi.co.uk/WK-3983

Watched? (3min)

Read? (6min)

Completed? (10min)

Question No.

8

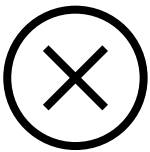
edexcel

!NOT TO SCALE!

The diagram shows three sides of a regular polygon. How many sides does it have?

A 44 B 2 C 156 D 15

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Tilly chose

C

Tilly's explanation:

"I can see the number 156!!!!"

Tilly's misunderstanding:

The student may not know where to start and has stated the given angle

Correct answer

D

Eedi understandig:

The size of an exterior angle is $180 - 156 = 24^\circ$. To get the number of sides, we can then do $360/24$, which gives us 15°

Recommended actions

Angles in Polygons

By Oxford University Press
eedi.co.uk/VD-8742

Watched? (10min)

Interior and Exterior Angles

By Oxford University Press
eedi.co.uk/DC-1486

Read? (6min)

Angles in Polygons

By Oxford University Press
eedi.co.uk/WK-6783

Completed? (10min)

Question No.

9

edexcel

NOT TO SCALE

A, B, C and D are vertices of a regular 18 sided polygon.
Angle $BCX = 90^\circ$
What angle is XCD ?

A 20° B 110° C 160° D 150°

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Tilly chose

B

Tilly's explanation:
"I just guessed"

Correct answer

B

Eedi's explanation:
The exterior angle is $360/18 = 20^\circ$. From the diagram, the angle we want is 90° plus the exterior, which gives us 110°

Recommended actions

Angles in Polygons
By Oxford University Press
eedi.co.uk/VD-0923

Interior and Exterior Angles
By Oxford University Press
eedi.co.uk/DC-6089

Angles in Polygons
By Oxford University Press
eedi.co.uk/WK-5234

Watched? (3min)

Read? (6min)

Completed? (10min)

Question No.

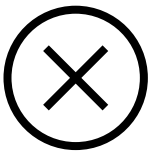
10

edexcel

For a regular polygon with n sides, what is the size of an interior angle?

A $180 - \frac{360}{n}$ B $\frac{360}{n}$ C $180 - n$ D $180(n - 2)$

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Tilly chose

D

Tilly's misunderstanding:

The student may have remembered the formula for total interior angles

Correct answer

A

Eedi's explanation:

An interior angle plus an exterior angle equals 180° . You can work out an exterior angle by doing $360/n$

Recommended actions

Angles in Polygons
By Oxford University Press
eedi.co.uk/VD-0943

Watched? (3min)

Interior and Exterior Angles
By Oxford University Press
eedi.co.uk/DC-3251

Read? (6min)

Angles in Polygons
By Oxford University Press
eedi.co.uk/WK-1209

Completed? (10min)

Tilly's Overall Effort

Overall Effort

71%

Effort is a good indicator of how confident and engaged Tilly is with the subject, helping and encouraging her at home will only benefit Tilly and help her improve.

65/80

Questions answered

48/80

Explanations given

61

Completed on time

4

Completed late

15

Uncompleted

Punctuality

Making sure she completes assignments on time is key, if assignments are late it can affect the insights and feedback we are able to offer you, Tilly and her teacher.

Tilly's Upcoming Topics

Oct

Mon 2nd **Scale Diagrams and Bearings**

—

Mon 9th **Basic Number**

—

Mon 16th **Factors and Multiples**

—

Mon 23th **Basic Algebra**

—

Get ahead

Scale Diagrams and Bearings

By Oxford University Press
eedi.co.uk/VD-9678

Watched? (3min)

Factors and Multiples

By Oxford University Press
eedi.co.uk/DC-8756

Read? (6min)

Basic Algebra

By Oxford University Press
eedi.co.uk/WK-2983

Completed? (10min)