Week 4
27/04/2020

Transformations

Monday 27th April

Warm up – write your prime numbers up to 30.

If you can't remember then watch this short video:

https://www.bbc.co.uk/bitesize/topics/zm982hv/articles/zvmhpg8

You can take the quiz that's under the video too if you like!

TASK 1

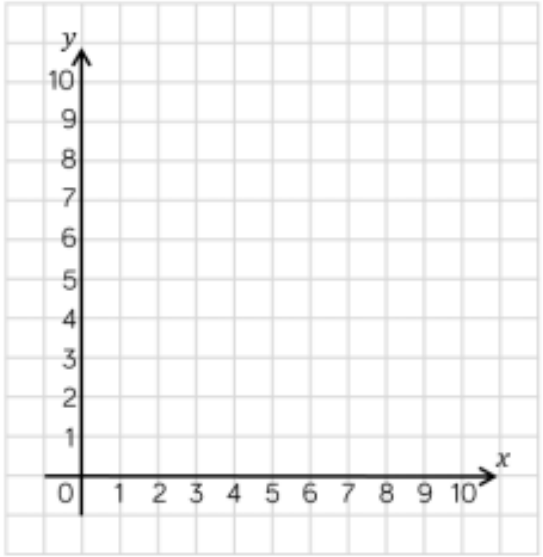
Plot the following points on the grid.

(3, 5)

(4, 4)

(0, 2)

(4, 0)



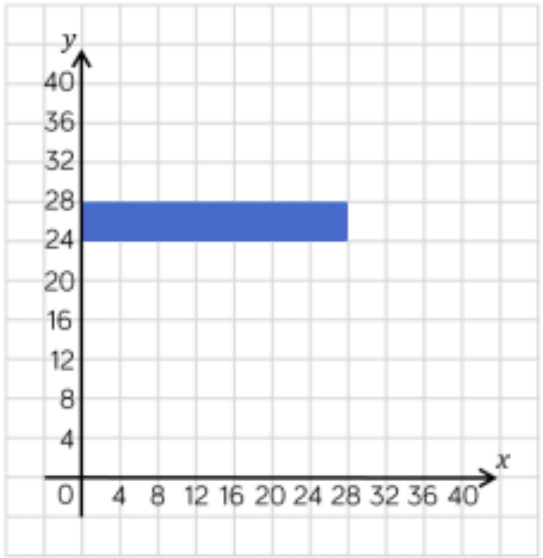
What are the coordinates of the vertices of the rectangle?

(,)

(,)

(,)

(,)



If you need a reminder of how to plot coordinates – watch this short video clip: https://www.bbc.co.uk/bitesize/topics/zgthvcw/articles/z96k9qt

Print off this page if you can – don't try and draw all the grids yourself unless you have to.

Answers

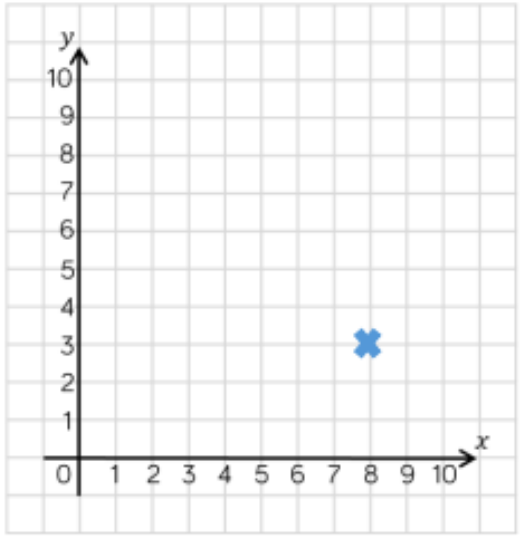
(0, 24)

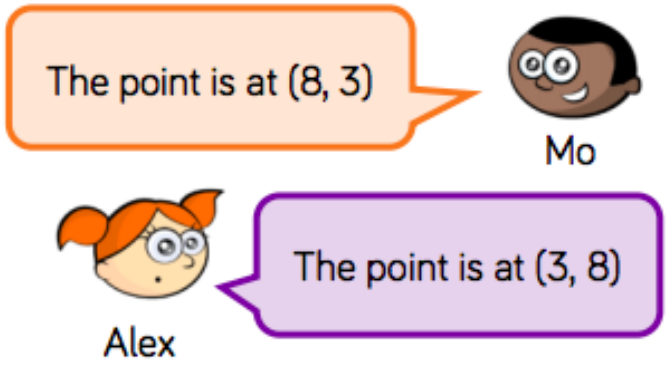
(0, 28)

(28, 24)

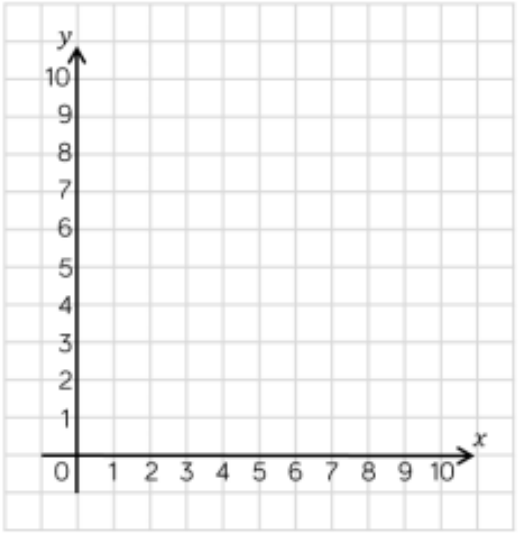
(28, 28)

Task 2 - Problem solving 1





Who do you agree with? Can you spot the mistake the other child has made?



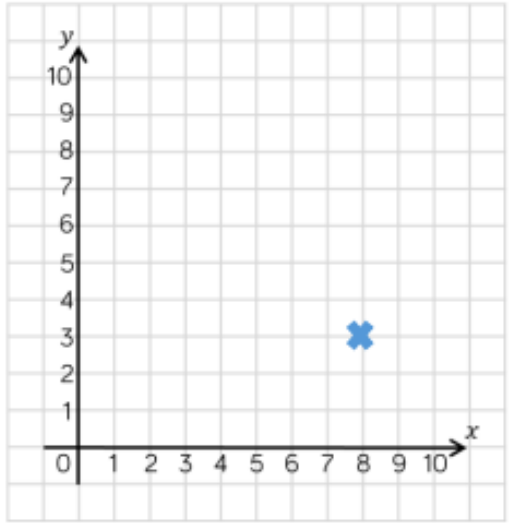
Annie is finding co-ordinates where the x-coordinate and the y-coordinate add up to 8.

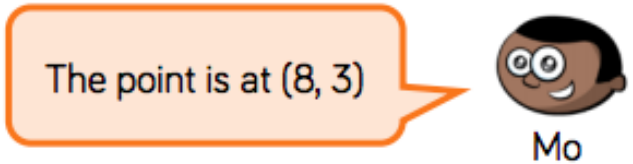
For example: (3, 5) $3 + 5 = 8$

Find all of Annie's coordinates and plot them on the grid. What do you notice?

Now do the same for a different total.

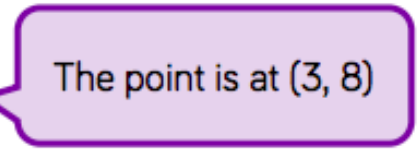
Problem solving 1 - answers





Mo

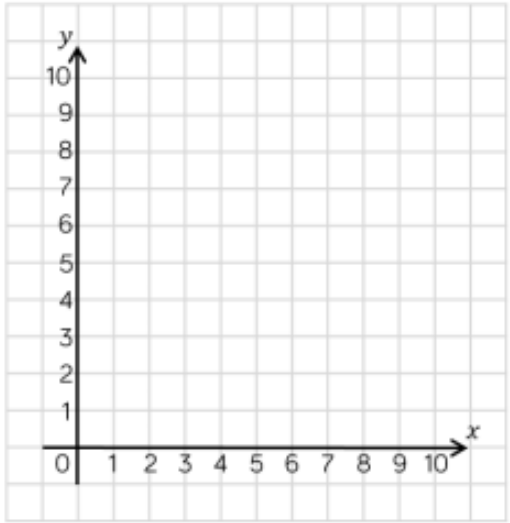




Alex

Who do you agree with? Can you spot the mistake the other child has made?

Mo is correct. Alex has made a mistake by thinking the first number is the y-coordinate.



Annie is finding co-ordinates where the x-coordinate and the y-coordinate add up to 8.

For example: (3, 5) $3 + 5 = 8$

Find all of Annie's coordinates and plot them on the grid. What do you notice?

Now do the same for a different total.

Annie's coordinates form a diagonal line (8, 0) to (0, 8)

Transformations – what are they?

- Watch the video – focus on reflection

https://www.bbc.co.uk/bitesize/topics/zs7mn39/articles/zj8ccqt

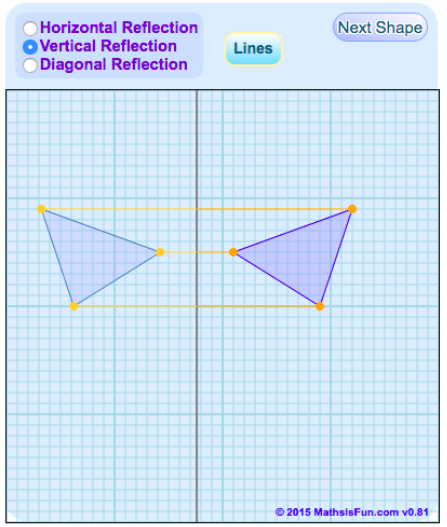
Transformations - Reflecting a shape

- The next step is to reflect a shape.

Q – When you reflect something, what changes about the object? Does it look exactly the same?

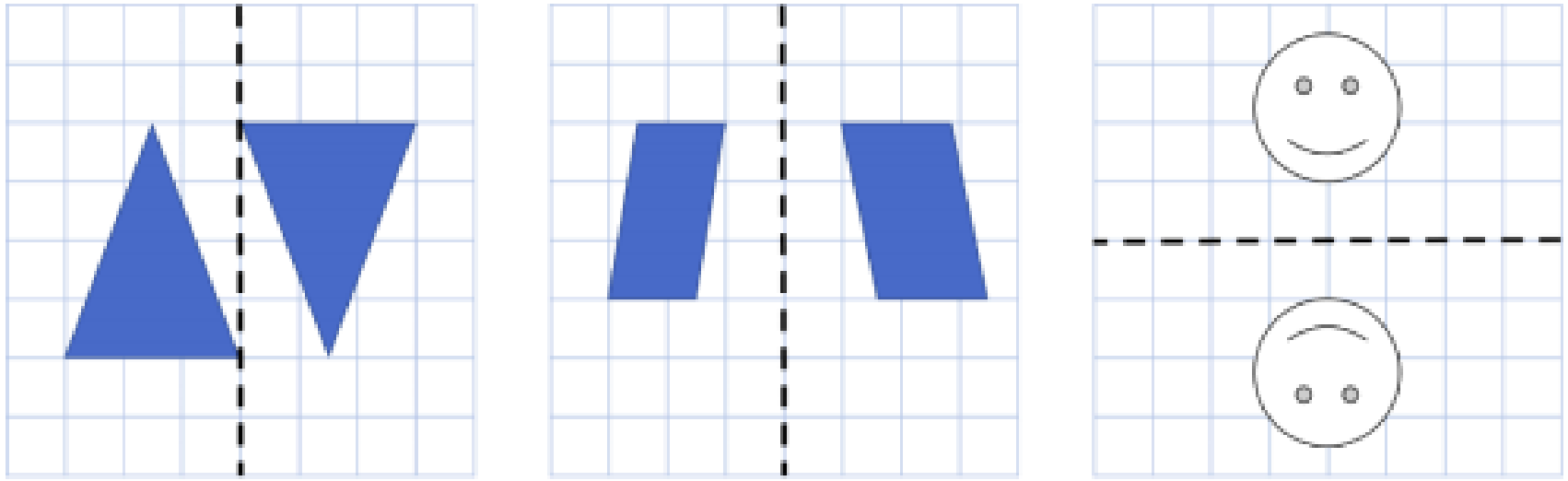
Have a look at this site and ‘play’ the with reflections

https://www.mathsisfun.com/geometry/reflection.html



Task 3 - Reflection

Which of the diagrams show reflections in the given mirror line?



You don’t have to draw these out to answer the question.
Challenge – Can you explain why two of the diagrams are not reflections?

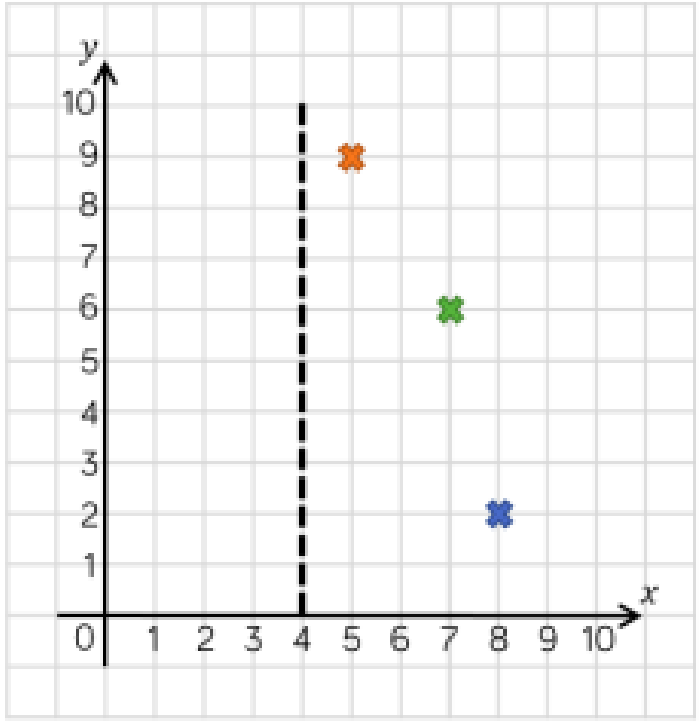
Task 3 answers

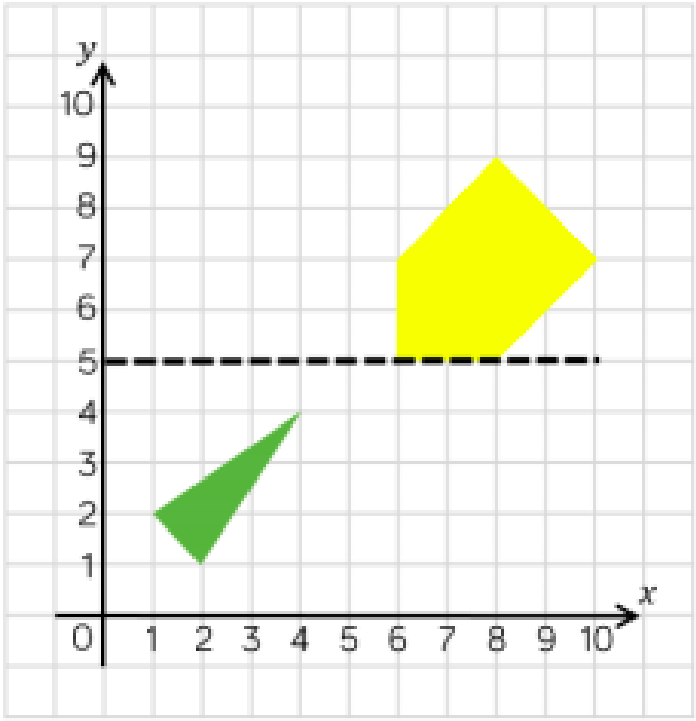
The third reflection is correct.

Explanation – reflection one is not correct as the triangle is ‘inverted’ (upside down) and reflection 2 is not correct as the parallelogram on the right is ‘thicker’ than the parallelogram, on the left.

Task 4

Reflect the coordinates and the shapes in the mirror line.





5

Print this page off if you can to draw the reflections.

If you have a small mirror you Can place it on the mirror line to check your reflection. If not count how many squares the point is from the mirror line.

Answers

- Red cross new coordinate – (3, 9)
- Green cross new coordinate – (1, 6)
- Blue cross new coordinate – (0, 2)

Plenary – summing up

<u>Write your answers in your book – you will need them later on in the week.</u>

- Can you explain to an adult or sibling a way of remembering which is the x axis and which is the y axis? (they may have a different way to share with you)
- Can you think of a way to remember which axis you use first when plotting a coordinate? (I know a rhyme about a corridor and a staircase!)
- Can you describe what a reflection is? (Is it a slide, a rotation or a flip?)