Translation of shapes. Translation is moving in a straight line.

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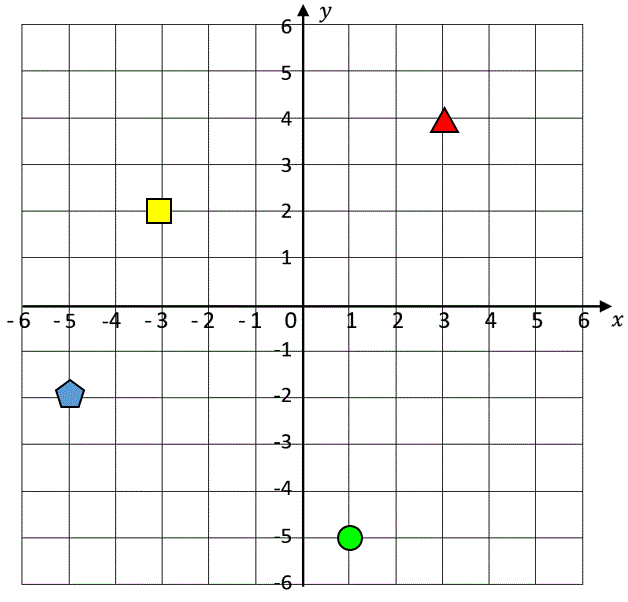
The blue shape at the top is translated 3 squares to the right (x axis) and 2 squares down (y axis). Look at where it is now. Note that each corner moves to the right 3 squares and down 2 squares.

Use the grid on the next sheet to translate each shape.

1. The square is translated 4 squares to the left and 2 squares up.
2. The rectangle is translated 2 squares to the right and 4 squares up.
3. The triangle is translated 3 squares to the left and 1 squares down.

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We can use coordinates with translation. Remember, when you read coordinates, you read ‘along the corridor and then up the stairs’. In other words the x coordinate (left to right) comes first and the y coordinate (up and down) comes next.



The coordinate of the yellow square is -3, 2 because it has gone across the x axis to -3 and up the y axis the 2.

Write the coordinates for:

1. The triangle ……………………….
2. The circle ………………………….
3. The pentagon …………………..

Answers

1. Triangle 3, 4
2. Circle 1,-5
3. Pentagon -5,-2

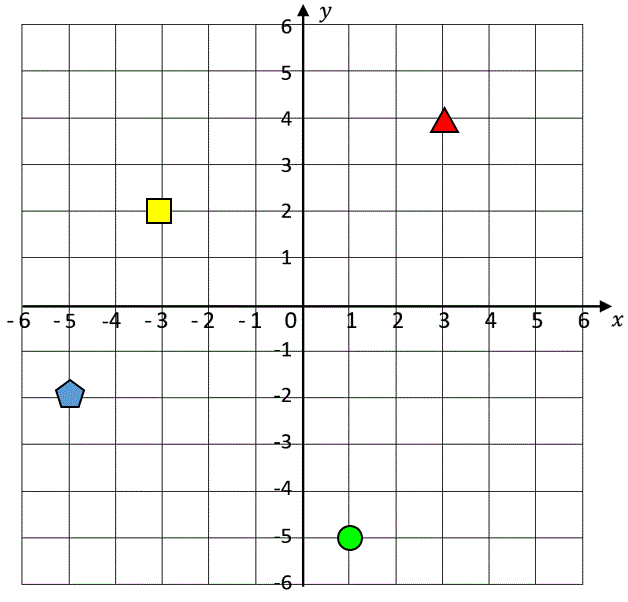
Translation and coordinates.

If I translate a point **4** squares on the **x axis**, if moves 4 places to the **right** in a **positive** direction.

If I translate a point **-4** on the x axis, it moves 4 places to the **left** in a **negative** direction.

If I translate a point **3** squares on the **y axis**, if moves 3 places **up** in a **positive** direction.

If I translate a point **-3** on the **y axis**, it moves down 3 places **down** in a **negative** direction.



If I translate the triangle -2, 1, this means it moves to the left on the x axis 2 squares and moves up the y axis 1 square.

Its new coordinates are 1, 5

Try these:

1. Translate the square 2,3. (It goes to the right 2 squares and up 3 squares)
2. Translate the circle -4, 2 (4 to the left and 2 up)
3. Translate the pentagon 7, -2 (7 to the right and 2 down)
4. Draw a shape at point 3,-1. Now translate it 2, -3. Draw where it should be.

Answers

1. Square is at -1,5
2. Circle is at -3, -3
3. Pentagon is at 2, -4
4. Your shape is at 5,-4