

Daily Practice 8.9.2015

- Q1. Multiply out and simplify  $2(x-2) + 3(x+4)$   
 $2x - 4 + 3x + 12$   
 $5x + 8$
- Q2. Rearrange the formula  $gh + c = b$  such that it is in terms of  $g$   
 $gh = b - c$   
 $g = \frac{b-c}{h}$
- Q3. Find the cost of a dress that was £35 and reduced by 20% in the sale  
 $£35 \div 5 = £7$   
 $£35 - 7 = £28$
- Q4. Calculate the volume of a cylinder with diameter 15cm and height 12cm  
 $V = \pi r^2 h = \pi \times 7.5^2 \times 12 = 2120.58 \text{ cm}^3$
- Q5. Solve  $\frac{3(x+2)}{5} - \frac{x}{4} = 4$

$$\begin{aligned} \frac{3x+6}{5} - \frac{x}{4} &= 4 \\ (65) \quad \times 5 & \\ 3x+6 - \frac{5x}{4} &= 20 \\ \times 4 & \\ 12x+24 - 5x &= 80 \\ 7x+24 &= 80 \\ 7x &= 56 \\ x &= 8 \end{aligned}$$

Today we will be learning about transformations.

Transformations 8.9.15

A shape or point is transformed if it has changed position or size.

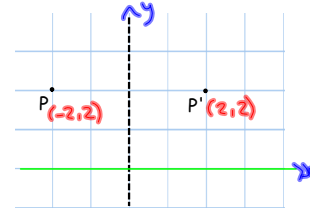
The 4 basic types of transformations are reflection, rotation, translation and enlargement.

We have already looked at reflection and rotation in symmetry and have more recently looked at enlargement/reduction.

Transformations

The original shape/point is called the object and the result after the transformation is called the image.

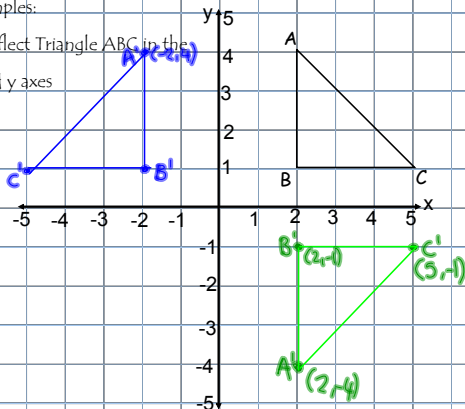
Below, the reflection of  $p$  is known as  $p'$



Transformations

Examples:

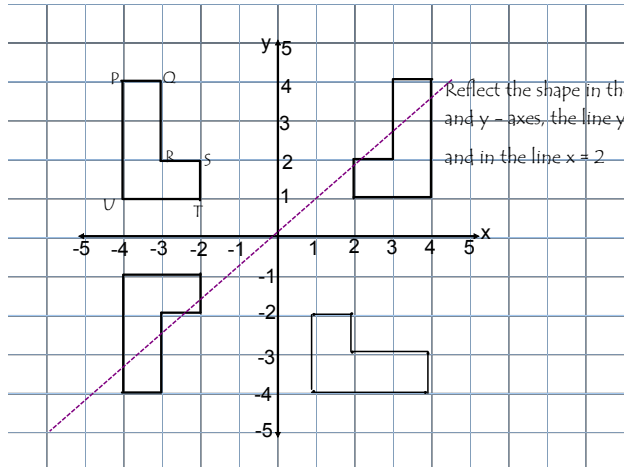
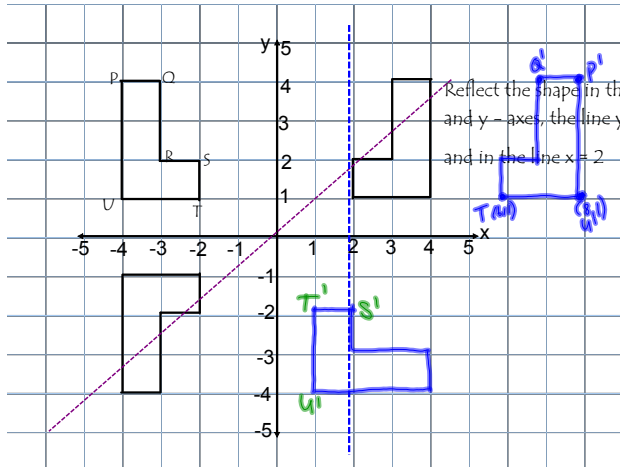
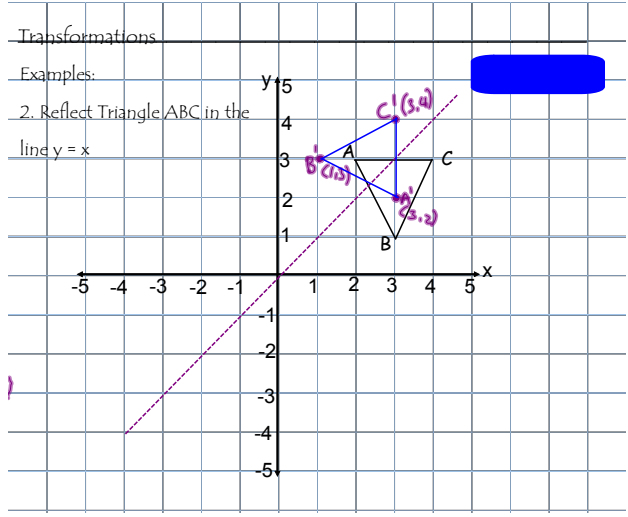
1. Reflect Triangle ABC in the x and y axes



Daily Practice 9.9.2015

- Q1. Find 17% of 800  
 $10\% = 80$     $1\% = 8$   
 $5\% = 40$     $2\% = 16$     $136$
- Q2. 400 bars of soap cost £40, how much would 7 cost?  
 $\frac{400}{400} = \frac{£40}{1000}$     $7 \times 10p = £0.70$
- Q3. Paint is shared in the ratio orange to yellow 4:5, if there are 12 litres of orange paint, how much yellow is there?  
 $0:Y$   
 $\times 3$   $(4:5) \times 3$   
 $(12:15)$    Yellow 15 litres
- Q4. Solve for  $x$     $5x - 1 = 2x + 14$   
 $-2x \quad -2x$     $3x = 15$   
 $3x - 1 = 14$     $+1 \quad +1$   
 $x = 5$
- Q5. Write 18 out of 30 as a percentage  
 $18 \div 30 = 0.6$   
 $0.6 \times 100 = 60\%$

Today we will be continuing to reflect shapes on coordinate grids.



Daily Practice 11.9.2015

Q1. Factorise  $4x^2 - 12xy$

$$4x(x-3y)$$

Q2. Calculate the volume of a cuboid with length 5cm, breadth 4cm and height 10cm. Give your answer to 2 s.f.

$$V = bh = 5 \times 4 \times 10 = 200 \text{ cm}^3$$

Q3. Write the following in tolerance notation: min. = 19.1cm, max. = 19.6cm

$$(19.35 \pm 0.25)$$

Q4. State the equation of the line joining (0, 1) and (2, 5)

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - 1}{2 - 0} = \frac{4}{2} = 2$$

$$y = mx + c$$

$$y = 2x + c$$

$$y = 2x + 1$$

Today we will be learning about rotating shapes on a coordinate axis.

Target Setting

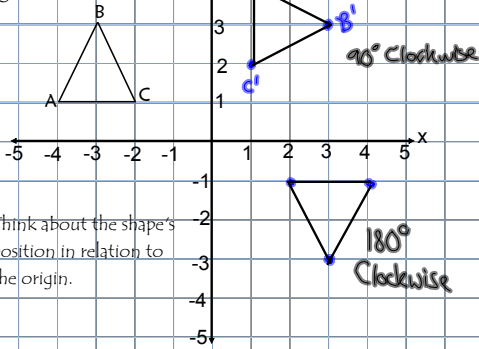
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Rotating shapes on a coordinate grid

11.9.15

Example 1:

Rotating triangle ABC about the Origin O



Think about the shape's position in relation to the origin.

Example 2:

Rotating triangle ABC about the point (1, -1)

Think about the shape's position in relation to the point.

