

Name	
Form	
Teacher	

Maths

Homework Booklet

Year 9 Summer 1

Set P,1,2,3

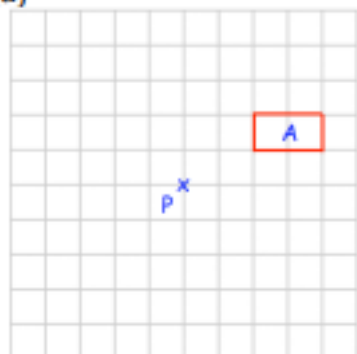
Topic	Score achieved	Sparx %
1. Rotations	/9	%
2. Reflections	/9	%
3. Translations	/9	%
4. Enlargements	/12	%
5. Percentages of amounts	/28	%



Week 1

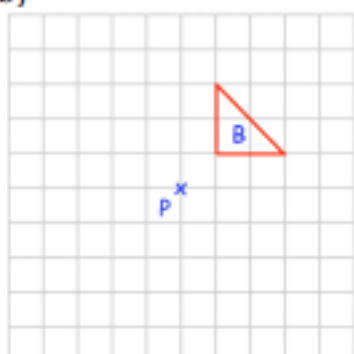
Question 1: Rotate each of the shapes below as instructed, using P as the centre of rotation.

(a)



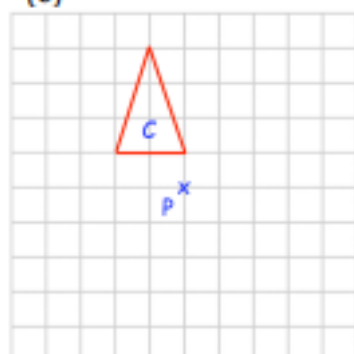
rotate 90° clockwise about P

(b)



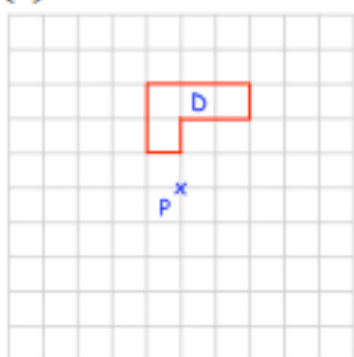
rotate 90° anticlockwise about P

(c)



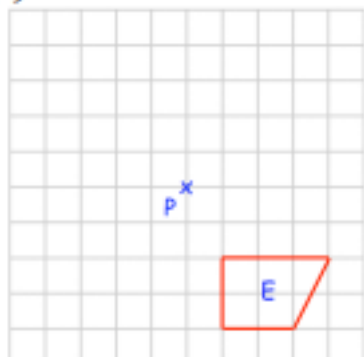
rotate 90° clockwise about P

(d)



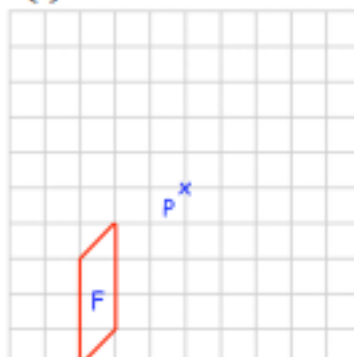
rotate 180° about P

(e)



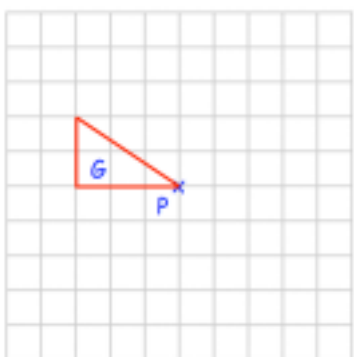
rotate 90° anticlockwise about P

(f)



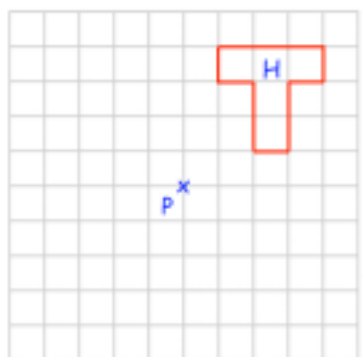
rotate 180° about P

(g)



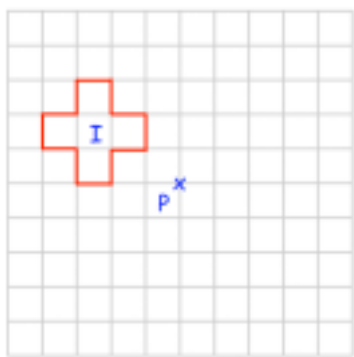
rotate 90° clockwise about P

(h)



rotate 270° clockwise about P

(i)



rotate 270° anticlockwise about P

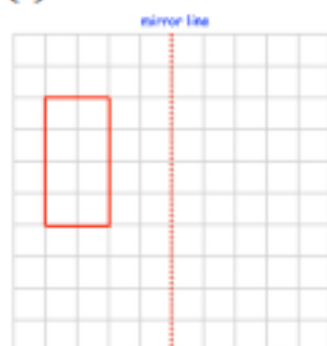
Sparx – Homework Answers



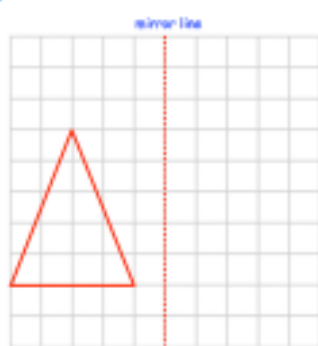
Week 2

Question 1: Reflect each shape in the mirror line given

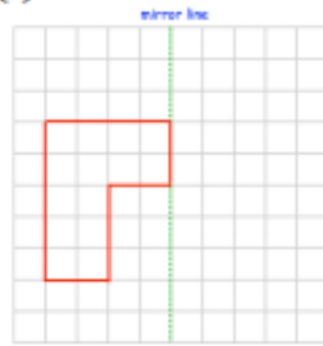
(a)



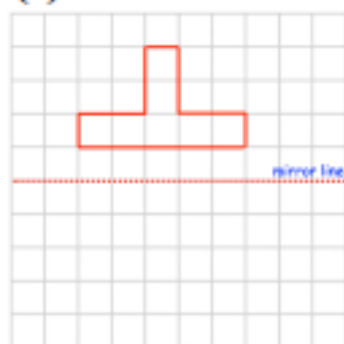
(b)



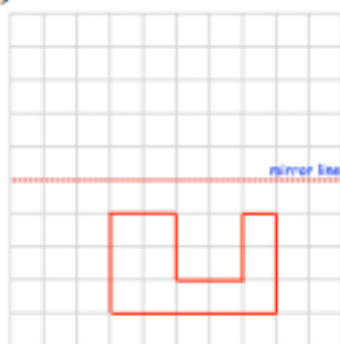
(c)



(d)



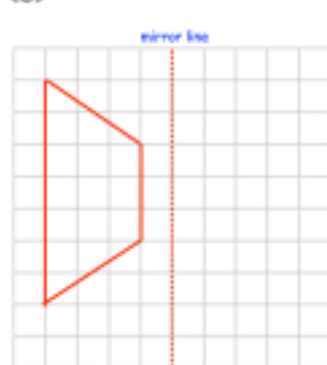
(e)



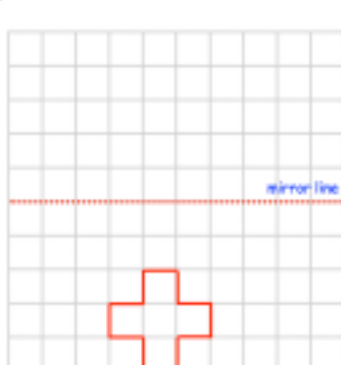
(f)



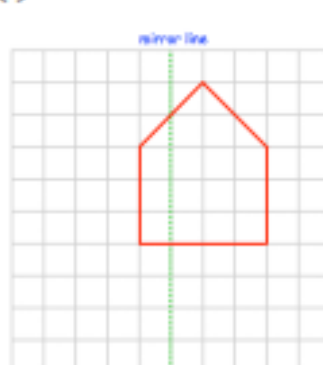
(g)



(h)



(i)



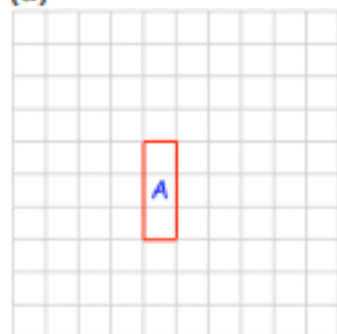
Sparx – Homework Answers



Week 3

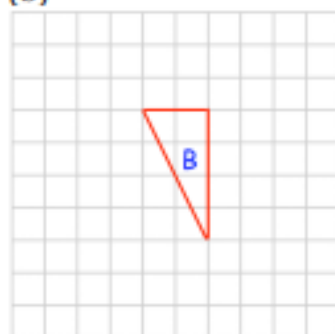
Question 1: Translate each of the shapes below as instructed.

(a)



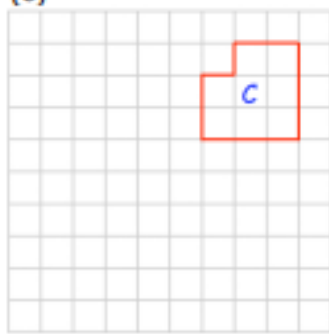
Translate A by $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$

(b)



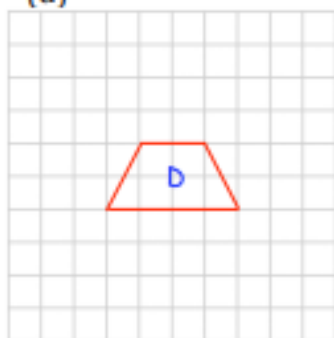
Translate B by $\begin{pmatrix} 2 \\ -2 \end{pmatrix}$

(c)



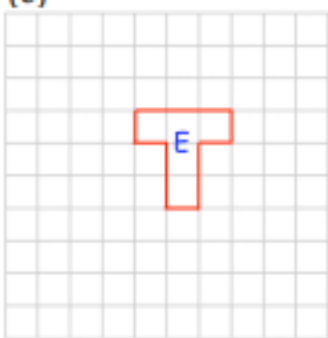
Translate C by $\begin{pmatrix} 0 \\ -5 \end{pmatrix}$

(d)



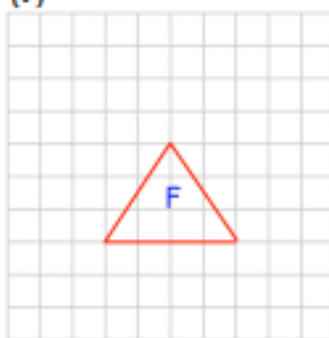
Translate D by $\begin{pmatrix} -3 \\ 3 \end{pmatrix}$

(e)



Translate E by $\begin{pmatrix} -2 \\ -4 \end{pmatrix}$

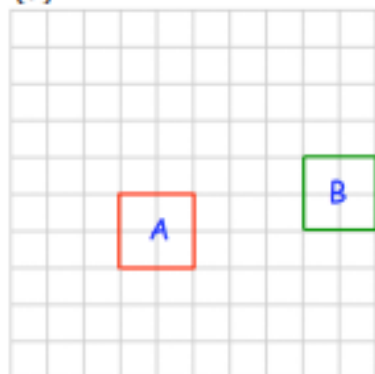
(f)



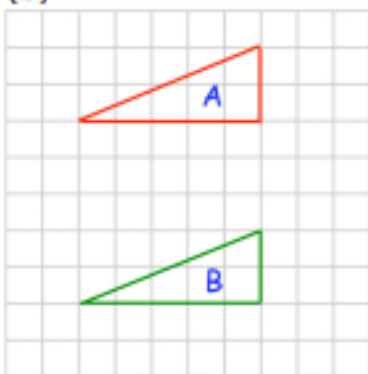
Translate F by $\begin{pmatrix} 1.5 \\ 0 \end{pmatrix}$

Question 2: Describe fully each translation that takes shape A to shape B

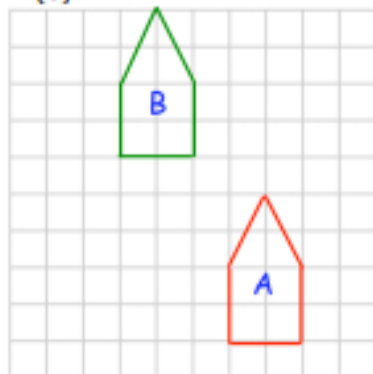
(a)



(b)



(c)



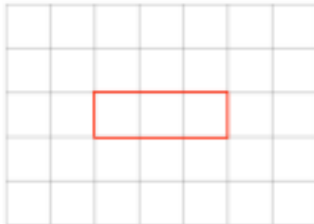
Sparx – Homework Answers



Week 4

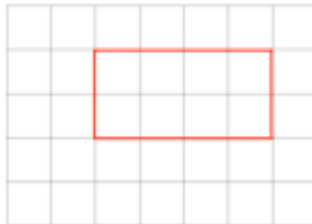
Question 1: Copy these shapes and then enlarge by the scale factor given.

(a)



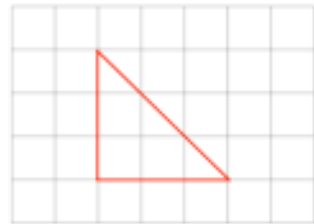
Enlarge by scale factor 3

(b)



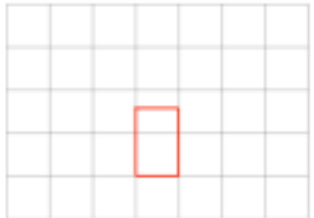
Enlarge by scale factor 2

(c)



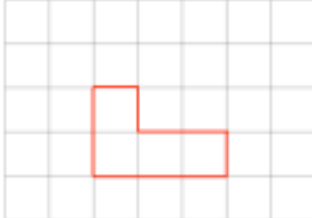
Enlarge by scale factor 3

(d)



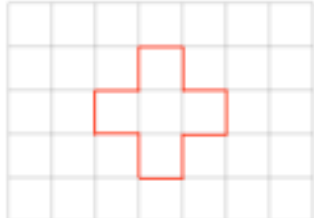
Enlarge by scale factor 4

(e)



Enlarge by scale factor 2

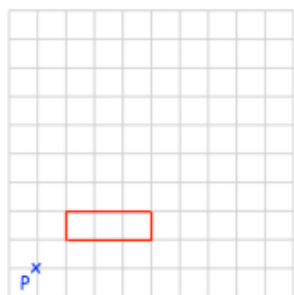
(f)



Enlarge by scale factor 4

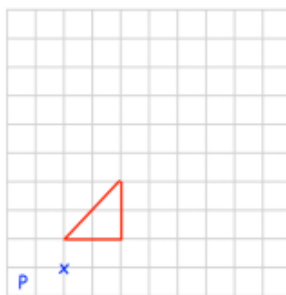
Question 1: Enlarge each shape by the scale factor given
Use P as the centre of enlargement.

(a)



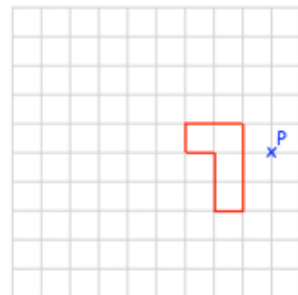
Enlarge by scale factor 2

(b)



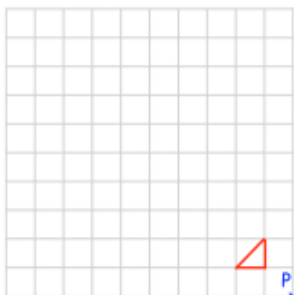
Enlarge by scale factor 3

(c)



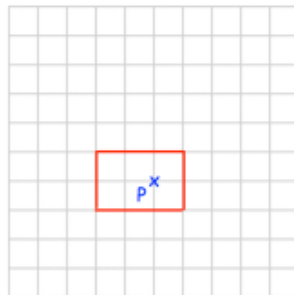
Enlarge by scale factor 2

(d)



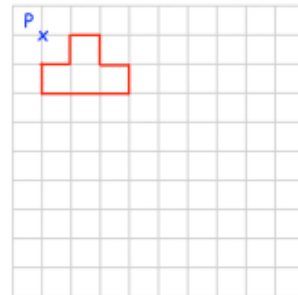
Enlarge by scale factor 4

(e)



Enlarge by scale factor 2

(f)



Enlarge by scale factor 3

Sparx – Homework Answers



Week 5

Question 1: Calculate the following

- | | | | |
|-------------------|----------------------|------------------|-----------------------|
| (a) 15% of 80ml | (b) 9% of 205kg | (c) 45% of £135 | (d) 17% of 540km |
| (e) 53% of 700g | (f) 14% of 12 hours | (g) 31% of 280kg | (h) 6% of 4GB |
| (i) 85% of 1250ml | (j) 66% of 9.4 miles | (k) 97% of \$54 | (l) 13% of 0.5 tonnes |

Question 2: Calculate the following

- | | | | |
|------------------|-------------------------|--------------------|--------------------|
| (a) 2.5% of 60cm | (b) 7.2% of 104ml | (c) 24.5% of 30m | (d) 47.9% of £3200 |
| (e) 0.3% of 44km | (f) 85.2% of 6000 marks | (g) 0.25% of \$840 | (h) 3.175% of 52g |

Question 3: Calculate the following

- | | | | |
|-----------------|------------------------|-----------------|-----------------------|
| (a) 109% of 30m | (b) 124% of 38 seconds | (c) 186% of £40 | (d) 196% of 20 miles |
| (e) 220% of 15g | (f) 140.5% of 180kg | (g) 371% of £60 | (h) 1054% of 70 hours |

Sparx – Homework Answers