SUBJECT: MATHS

Contents:

Unit 14. Position and transformation
- ✓ 14.1. Bearings (p.290-297)
- ✓ 14.2. The midpoint of a line segment (p.298-303)
- ✓ 14.3. Translating 2D shapes (p.304-309)
- ✓ 14.4. Reflecting shapes (p.310-317)
- ✓ 14.5. Rotating shapes (p.317-323)
- ✓ 14.6. Enlarging shapes (p.324-329)

Unit 15. Distance, area, and volume
- ✓ 15.1. Converting between miles and kilometres (p.331-335)

Instructions:
  1) **Students MUST complete the study guide before revision classes.**
  2) **Students are NOT ALLOWED to use calculators for problem-solving tasks.**

PART 1. MATHEMATICAL TERMS

NO.	TERMS	UNITS	DEFINITIONS	VIETNAMESE TRANSLATIONS
1	bearing	14.1		
2	north	14.1		
3	clockwise	14.1		
4	midpoint	14.2		
5	line segment	14.2		
6	coordinate	14.2		
7	translate	14.3		
8	column vector	14.3		
9	congruent	14.3		

10	reflect	14.4		
11	mirror line	14.4		
12	rotate	14.5		
13	centre of rotation	14.5		
14	anticlockwise	14.5		
15	enlarge/ enlargement	14.6		
16	centre of enlargement	14.6		
17	scale factor	14.6		
18	convert	15		
19	kilometre	15		
20	mile	15		

PART 2. EXERCISES

Question 1
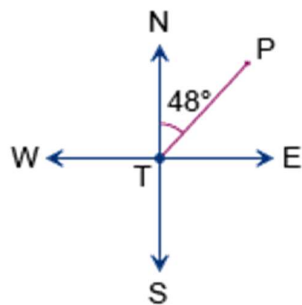
What is the bearing from T to P?

_____
_____
_____

Question 2
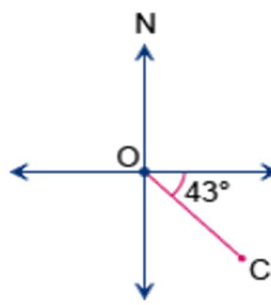
What is the bearing from O to C?

_____
_____
_____

Question 3
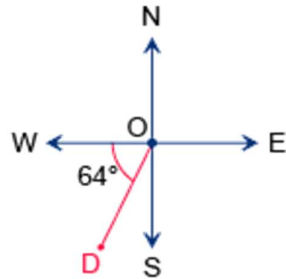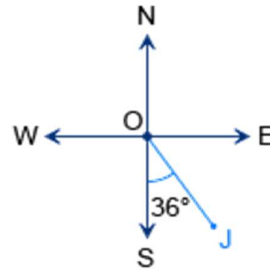

What is the bearing from O to D?

_____

_____

_____

Question 4

What is the bearing from O to J?

_____

_____

_____

Question 5

The bearing of town Y from town X is 104°.
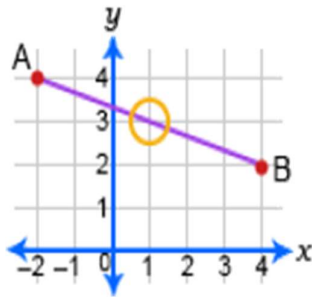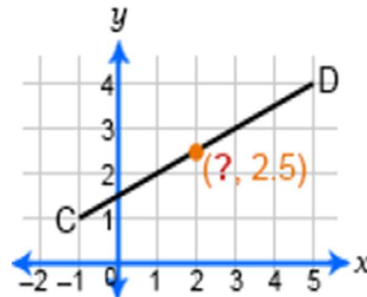Work out the bearing of town X from town Y.
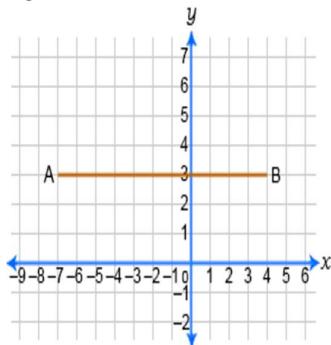
_____

_____

_____

Question 6

The midpoint of the line segment AB
= (1 , _____)

Question 7
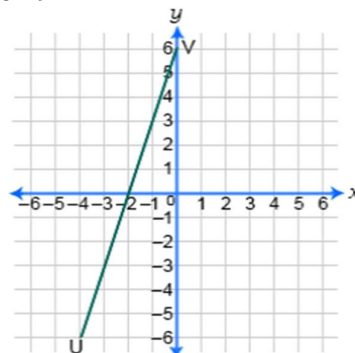

The midpoint of the line segment CD
= (_____ , 2.5)

Question 8

The midpoint of the line segment AB
= (-1.5 , _____)

Question 9

The midpoint of the line segment CD
= (_____ , _____)

Question 10

The midpoint of PQ has coordinates (–2, –3). P has coordinates (5, 7).
What are the coordinates of Q?

_____
_____
_____

Question 11

How many miles is the same as 640 kilometres?

_____
_____
_____

Question 12

How many metres is the same as 5 miles?

_____
_____
_____

Question 13

How many miles is the same as 56 kilometres?

_____
_____
_____

Question 14

How many kilometres is 34.5 miles?

_____
_____
_____

Question 15

How many miles is the same distance as 6.8 km?
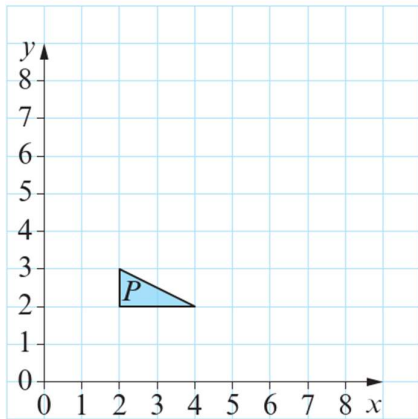
_____
_____
_____

Question 16

How many miles difference is there between 840 kilometres and 525 miles?
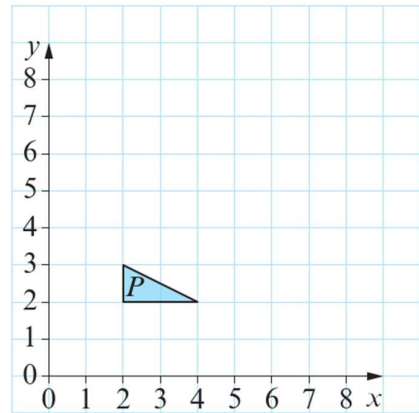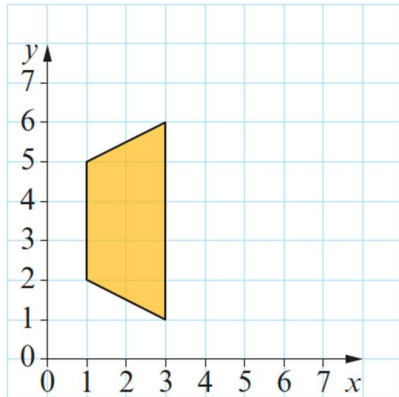
_____
_____
_____

Question 17

Draw the image of P after a translation by the vector $\begin{pmatrix} 2 \\ -2 \end{pmatrix}$
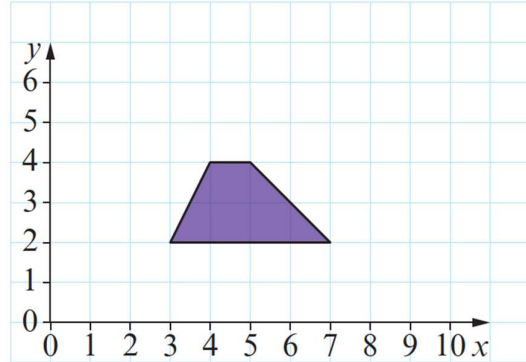
Question 18

Draw the image of P after a translation by the vector $\begin{pmatrix} -1 \\ 3 \end{pmatrix}$
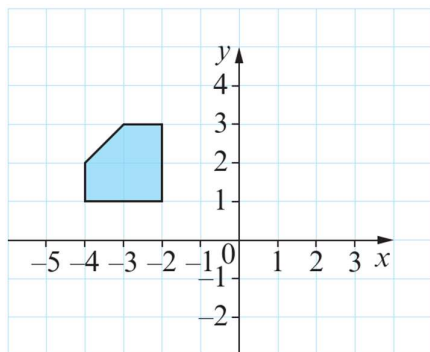
Question 19

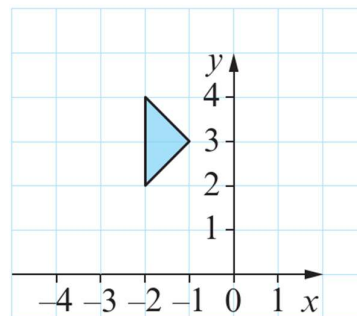Draw the image of this shape after a reflection in the mirror line x = 3

Question 20

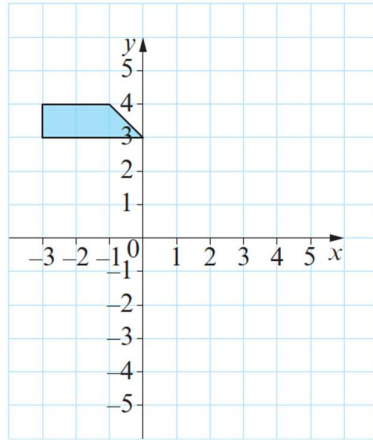Draw the image of this shape after a reflection in the mirror line y = 4

Question 21

Draw the image of this shape after a rotation 90° clockwise about the centre of rotation (-2, -1)
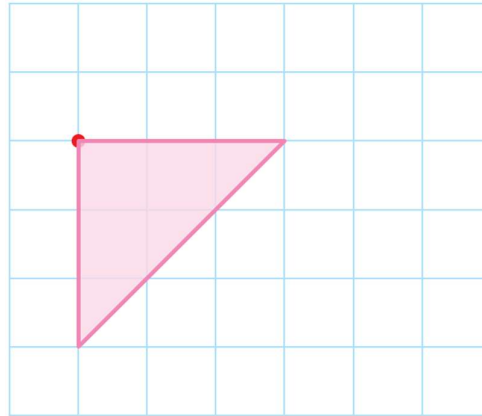
Question 22

Draw the image of this shape after a rotation 90° anticlockwise about the centre of rotation (-2, 2)

Question 23
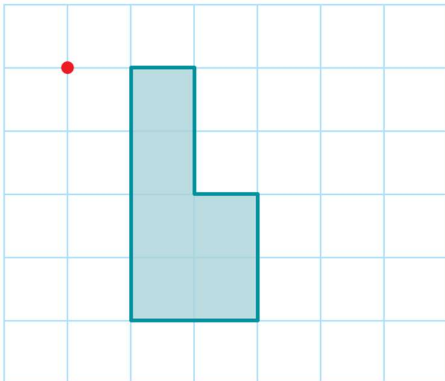

Draw the image of this shape after a rotation 180° clockwise about the centre of rotation (1,0)

Question 24

Enlarge the shape with scale factor 2 from the centre of enlargement

Question 25

Enlarge the shape with scale factor 3 from the centre of enlargement