



COLÁISTE
BRÍDE

1st year

Maths Workbook

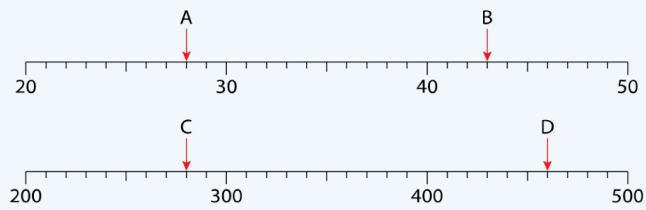
2023

Q5 Use may use your calculator to calculate the following if necessary:

- (i) $\sqrt{9}$ (ii) $\sqrt{25}$ (iii) $\sqrt{64}$ (iv) $\sqrt{144}$ (v) $\sqrt{400}$.

Q6

Write down the values of the numbers A, B, C and D which are marked with arrows in the following diagrams:



Q7

Round each number to the nearest 10 and make an estimate of the answer to each of these:

(i) $\frac{63 \times 57}{31}$

(ii) $\frac{204 \times 96}{53}$

(iii) $\frac{396 \times 304}{154}$

Q8 Evaluate or find the value of:

(i) $6 \times (5 + 3) - 8 \div 2$

(ii) $\frac{30 - (3 \times 2)}{4 \times 2 - 2}$

$$(v) \frac{1}{2} - \frac{1}{3}$$

$$(vi) \frac{1}{3} - \frac{1}{4}$$

$$(vii) \frac{3}{4} - \frac{2}{3}$$

$$(viii) \frac{3}{4} - \frac{5}{12}$$

Q4

Express each of the following as a single fraction or whole number.

$$(i) \frac{3}{4} \times \frac{2}{5}$$

$$(ii) \frac{1}{4} \times 8$$

$$(iii) 3\frac{1}{4} \times \frac{1}{2}$$

$$(iv) 4\frac{1}{2} \times \frac{2}{3}$$

Q5

Simplify each of these:

$$(i) \frac{8}{9} + \frac{2}{3}$$

$$(ii) 2\frac{9}{10} - 1\frac{3}{5}$$

$$(iii) 2\frac{2}{3} \times 2\frac{1}{4}$$

$$(iv) 2\frac{4}{5} \div \frac{7}{10}$$

Percentages Chapter 7

Q1 Find

$$(i) 10\% \text{ of } 380$$

$$(ii) 40\% \text{ of } 680$$

$$(iii) 30\% \text{ of } 1680$$

$$(iv) 15\% \text{ of } \text{€}420$$

$$(v) 45\% \text{ of } \text{€}140$$

$$(vi) 80\% \text{ of } \text{€}910.$$

Q2 Calculate

$$(i) \text{ Increase } 90 \text{ by } 10\%$$

$$(ii) \text{ Increase } 60 \text{ by } 20\%$$

$$(iii) \text{ Increase } 150 \text{ by } 30\%$$

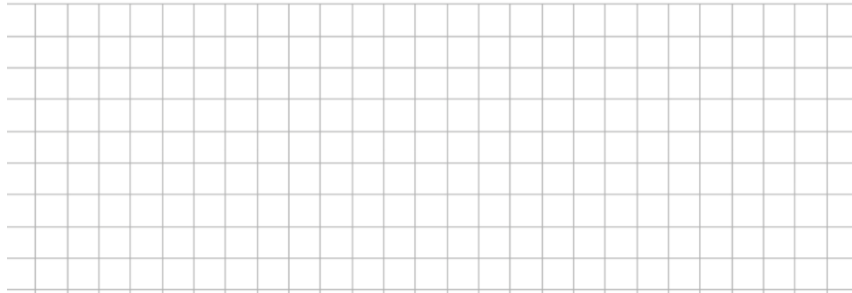
$$(iv) \text{ Decrease } 40 \text{ by } 10\%$$

$$(v) \text{ Decrease } 120 \text{ by } 20\%$$

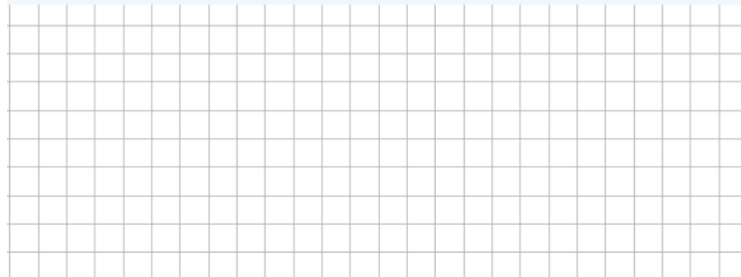
$$(vi) \text{ Decrease } 200 \text{ by } 5\%$$

Q7

- A jeweller bought a gold ring for €550 and sold it at a profit of 40%. Find the sale price.

**Decimals Chapter 5****Q1**

- (i) Write 123.6, correct to the nearest whole number.
(ii) Write 1.476, correct to one decimal place.
(iii) Write 12.062, correct to two decimal places.

**Q2 Simplify or make easier each of the following:**

- (i) $12.24 + 6.72 + 14.4$ (ii) $3.04 + 6.128 + 13.2$

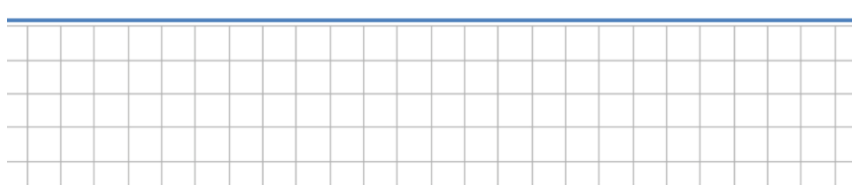


- (iv) $27.062 - 1.95$ (v) $7.1 - 3.94$ (vi) $3.016 - 0.99$

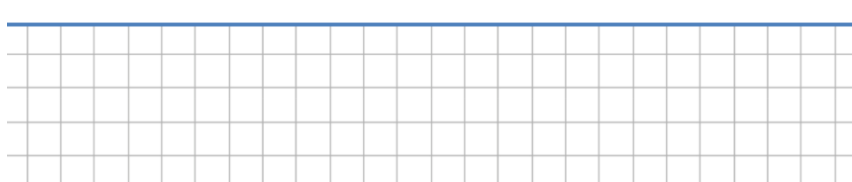
**Q3**

Work these out:

- (i) 2.3×100 (ii) 6.74×100 (iii) $86 \div 100$ (iv) 100×0.34



- (v) $3.28 \div 100$ (vi) $4 \div 100$ (vii) 0.047×100 (viii) $158 \div 100$



Converting Fractions to decimals to Percentages

	Decimal	Fraction	Percent
1	.7	7/10	70%
2	.29		
3		1/10	
4			90%
5	.3		
6		1/10	
7			61%
8	.07		
9			58%
10		19/100	

Perimeter & Area Chapter 9

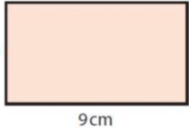
Q1

Convert the given measures to new units.

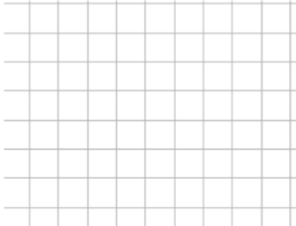
1. 37 cm = _____ mm
2. 927 m = _____ cm
3. 598 m = _____ cm
4. 20 m = _____ cm
5. 914 m = _____ cm
6. 58 m = _____ cm
7. 863 m = _____ cm
8. 626 cm = _____ mm
9. 38 m = _____ cm
10. 771 m = _____ cm
11. 18 m = _____ mm
12. 442 cm = _____ mm

Q2 Calculate the perimeter of the following:

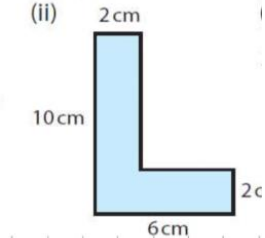
(i)




7cm
9cm



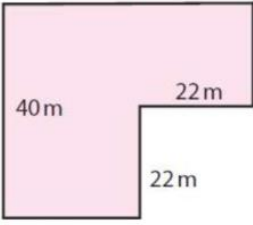
(ii)



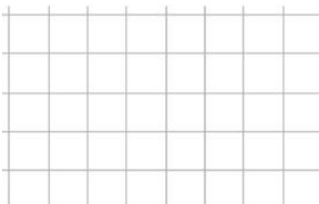
2cm
10cm
6cm
2cm



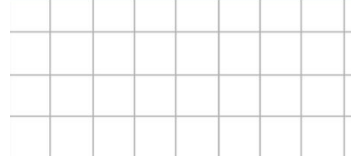
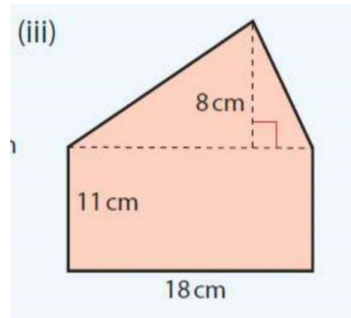
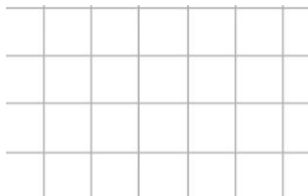
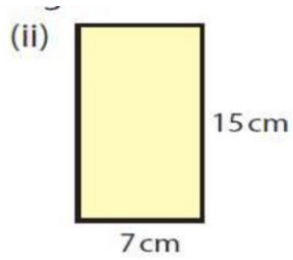
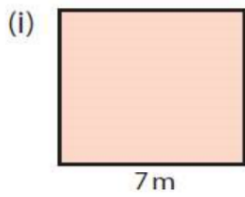
(iii)



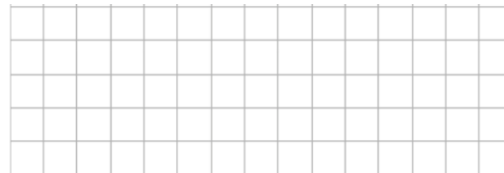
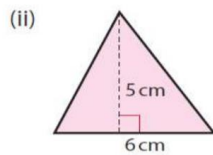
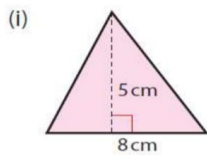
48m
40m
22m
22m



Q3 Calculate the area of the following shapes:

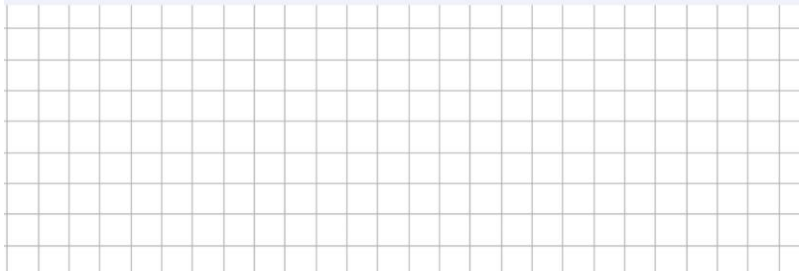
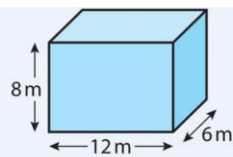


Q4 Find the area of these triangles:



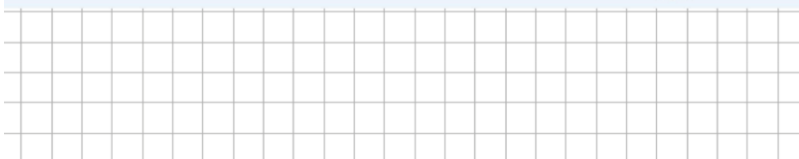
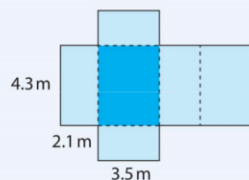
Q5

Find (i) the volume
(ii) the total surface area
of the given rectangular solid.

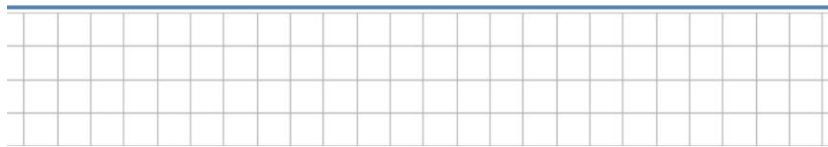
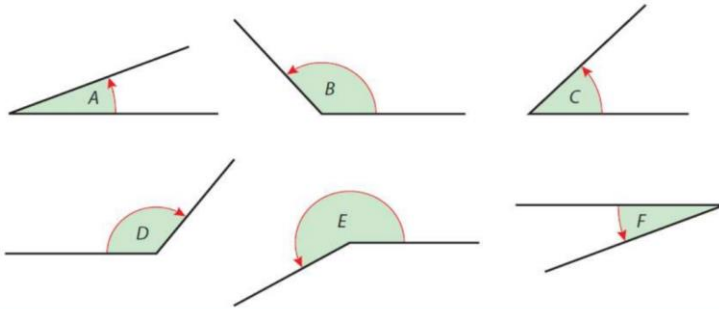


Q6

A closed rectangular box has a net as shown.
Find (i) the volume (ii) the surface of the box
correct to one decimal place.

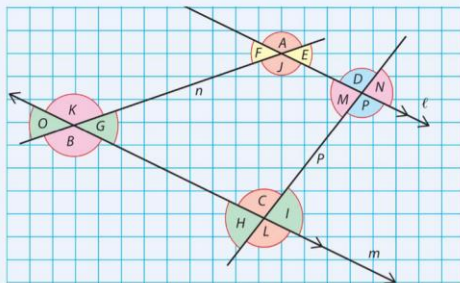


Q5 Using a protractor, measure the following angles accurately



Q6

Examining the diagram below copy and complete the chart.



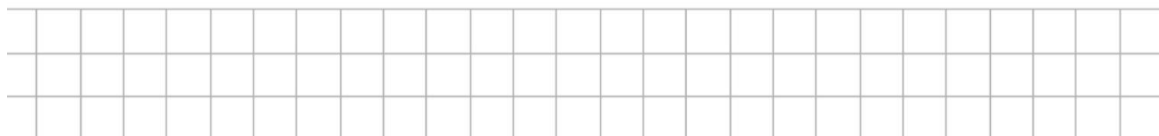
	Pair 1	Pair 2
1 pair of parallel lines		
2 pairs of alternate angles		
2 pairs of corresponding angles		
2 pairs of interior angles		
2 pairs of supplementary angles		
2 pairs of vertically opposite angles		

Algebra Chapter 8

Q1 Simplify (or make easier) each of the following by adding like terms:

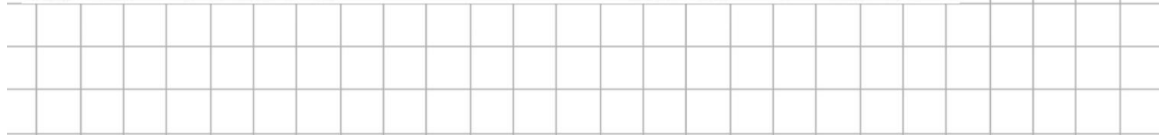
(i) $12a + b + 3a + 5b$

(ii) $3x + 2y + 3 + 4x + 3y + 1$



(iii) $5x - 4 + 2x + 8$

(iv) $7x - 4 - 3x + 7$



(v) $6a + b + 3 + 2a + 2b - 1$

(vi) $3x + 4 + 2x - 6 + x + 3$



Q4

The result of throwing a dice 30 times is shown.

1 2 3 3 5 2 1 6 5 4
 2 4 5 3 2 3 1 4 2 6
 6 3 6 5 3 1 3 4 6 5

Score	Tally	Frequency
1		
2		
3		
4		
5		
6		

- (i) Copy and complete the frequency table for these scores.
- (ii) Draw a bar chart to show the data. Which score occurs most often?

Q5

The stem and leaf plot below shows the ages of the first 25 customers to enter a shop one morning.

0	7 9
1	5 7 8 9
2	0 2 3 5 6 8 9
3	2 4 7 8 9
4	1 3 6 8
5	2 4 5

Key: 1|8 = 18

- (i) What age was the youngest customer?
- (ii) How many customers were aged between 20 and 30 years inclusive?
- (iii) What fraction of customers were aged between 30 and 40 years?
- (iv) How many customers were in their teens?
- (v) How many were younger than the oldest customer?

Q6

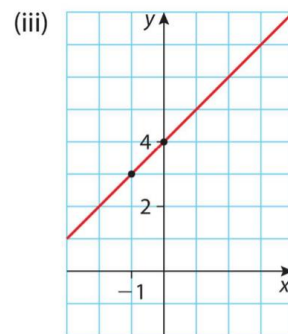
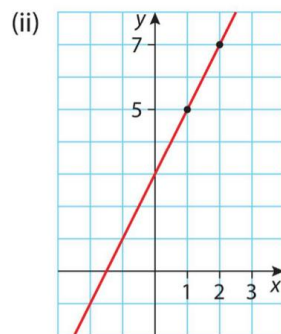
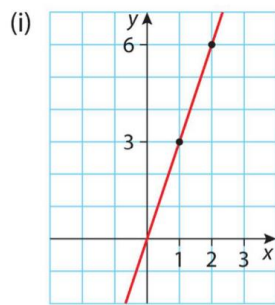
The numbers of points gained by the teams in a football league at the end of the season are as follows:

38 62 33 46 24 53 47 66 41 62
 38 80 46 45 51 54 39 52 62 34

- (i) Draw a stem and leaf plot to represent this data.
- (ii) How many teams got 60 or more points?
- (iii) What was the difference between the highest and lowest number of points?
- (iv) What percentage of the teams scored between 40 and 50 points?

Q5

Work out the slope of each of the lines below:



Blank grid for working out the slope of the lines.

Q6 Using the slope formula or otherwise

Find the slope of the line through each pair of points:

(iv) $(-2, 4)$ and $(2, 6)$

(v) $(1, 5)$ and $(3, -1)$

(vi) $(-3, 2)$ and $(1, -4)$

Blank grid for working out the slope for each pair of points.

Geometry 2 Triangles Chapter 15

NB remember to learn the constructions from section 15.4

Q1

For the given triangle, write down

(i) $|\angle ABC|$

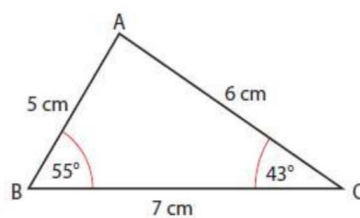
(ii) $|\angle ACB|$

(iii) $|\angle BAC|$

(iv) $|AB|$

(v) $|AC|$

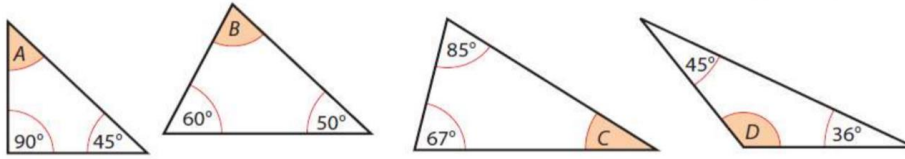
(vi) $|BC|$



Blank grid for writing down the answers for the triangle problem.

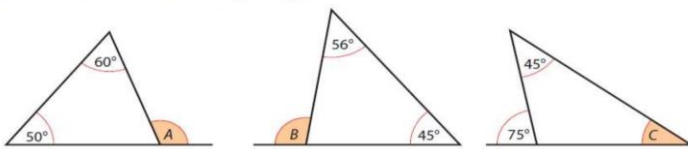
Q2

Find the size of the angle marked with a letter in each of the following triangles:



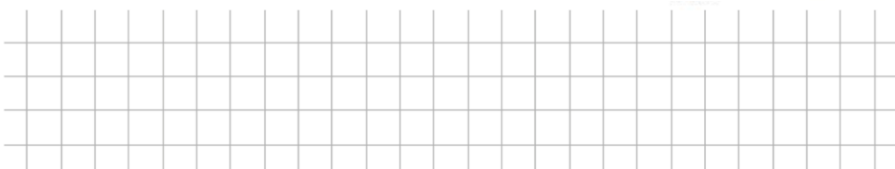
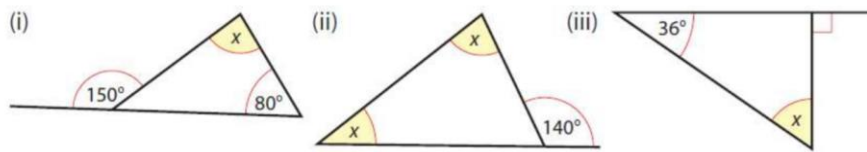
Q3

Remembering that a straight angle is 180° , find the size of the angle marked with a letter in each of the following triangles:



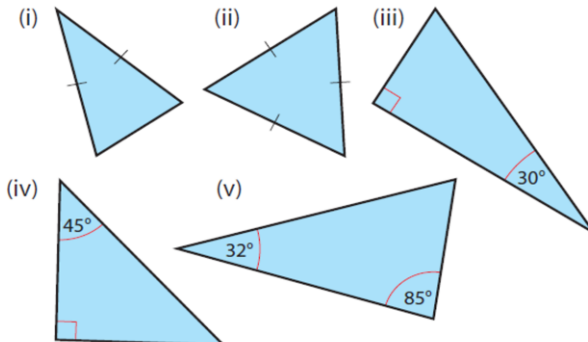
Q4

Find the value of x in each of these triangles:

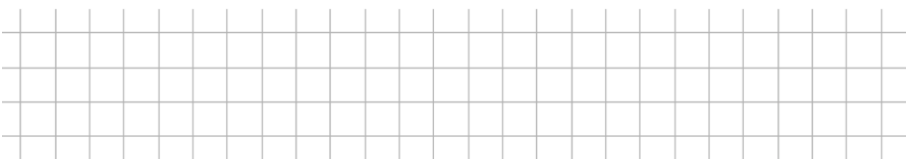


Q5

Pick the best label for each of the following triangles from the ones given below.



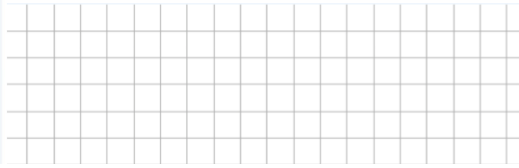
- Right-angled isosceles
- Right-angled
- Scalene
- Equilateral
- Isosceles



Q6

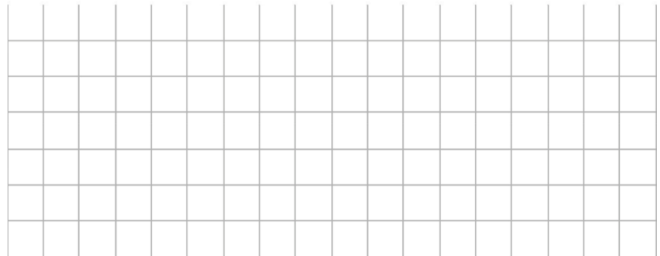
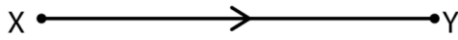
Say whether each of these statements is true or false:

- (i) A triangle can have two right angles.
- (ii) A triangle can have a right angle and two acute angles.
- (iii) A triangle can have an acute angle and two obtuse angles.
- (iv) A triangle can contain a right angle and an obtuse angle.
- (v) An equilateral triangle could contain a right angle.



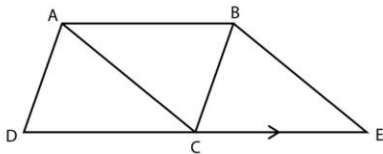
Transformations Chapter 17

Q1 Draw a sketch of the image of the letter A shown below under the given translation:



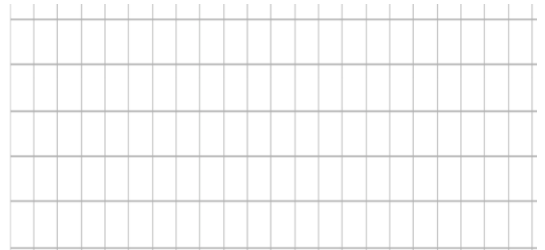
Q2

ABCD and ABEC are parallelograms.



Under the translation \vec{CE} , write down the image of

- (i) the point A
- (ii) [AD]
- (iii) $\triangle ADC$
- (iv) [AC].



Q3

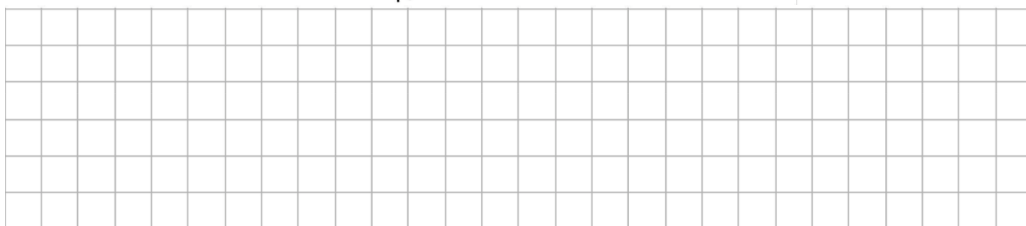
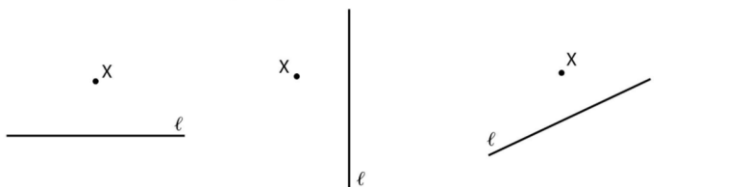
How many axes of symmetry has each of the following figures?

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

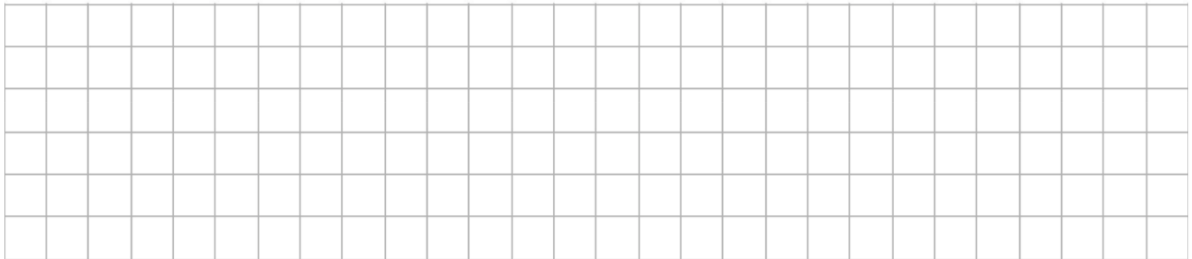
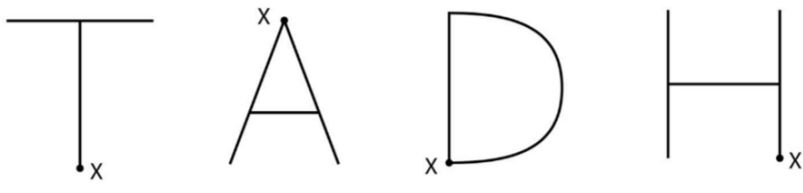


Q4

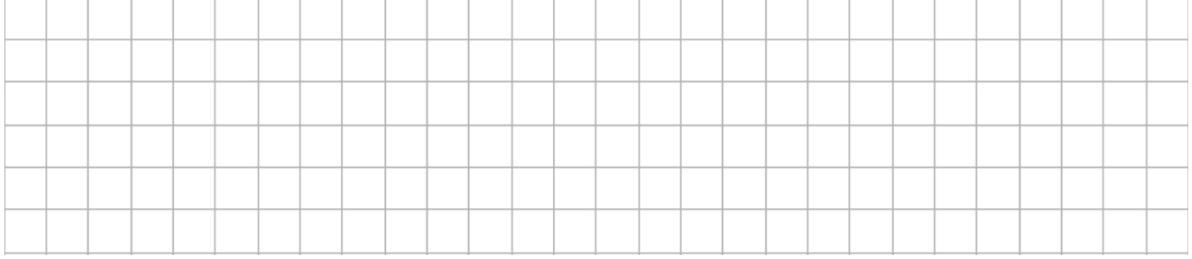
Use a set square and ruler to construct the image of X by S_ℓ , axial symmetry in the line ℓ , in each of the following diagrams:



Q5a Draw a rough sketch of the image of each of the following letters under central symmetry in the point X:



Q5b Describe how each image above appears in relation to the original figure.



Solving equations Chapter 14

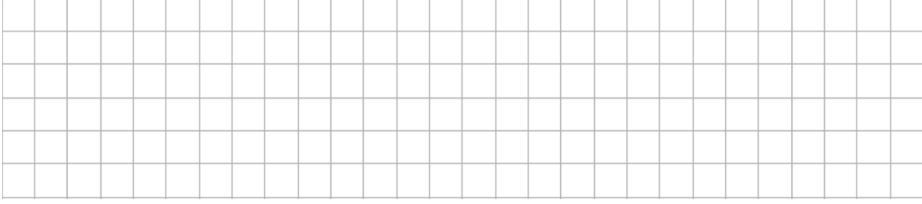
Q1 Solve each of the following equations, i.e. find the value of x

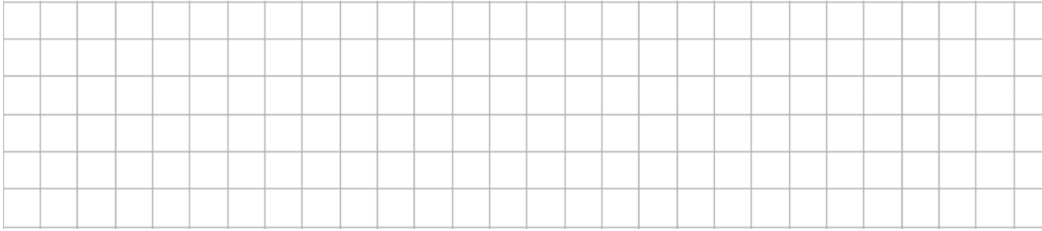
- 2. $x + 4 = 10$
- 3. $x + 6 = 18$
- 4. $x + 7 = 12$
- 5. $x + 3 = 11$



Q2 Solve each of the following equations, i.e. find the value of x

- 2. $3x + 3 = 2x + 7$
- 3. $8x + 5 = 7x + 10$
- 4. $5x + 2 = 4x + 8$

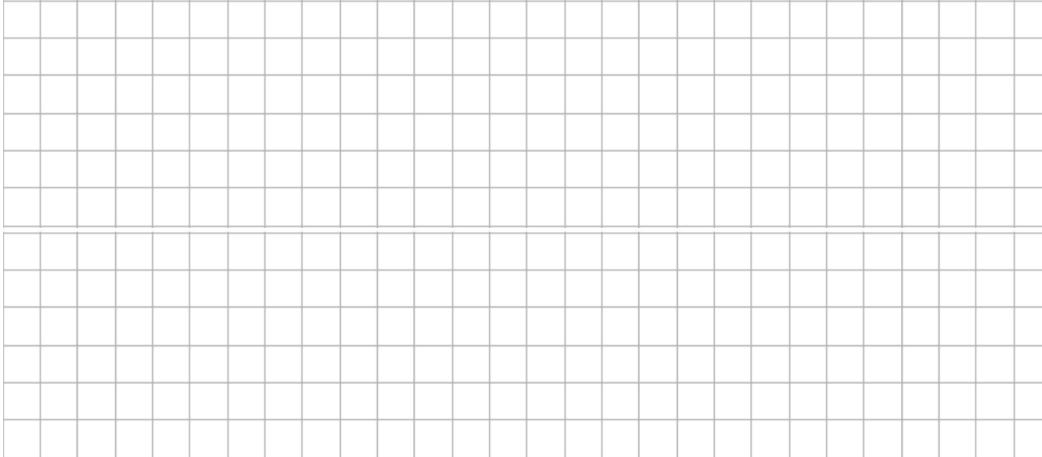




Q3 Solve each of the following equations, i.e. find the value of x by removing the brackets

5. $3(2x + 1) = 33$

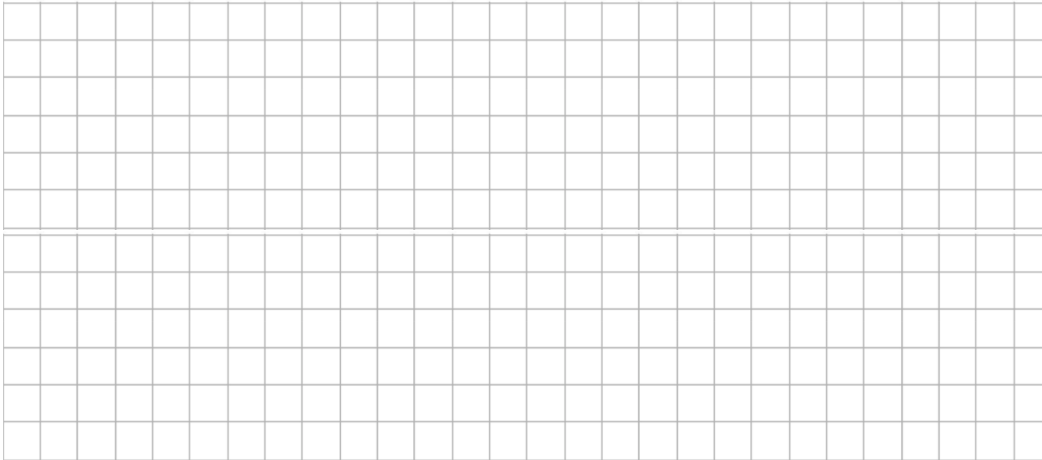
6. $4(2x - 3) = 36$



Q4 Solve each of the following equations, i.e. find the value of x by removing the brackets

9. $3(2x - 10) = 2x + 10$

10. $5(2x - 1) = 8x + 7$



Q5

13. $3(5x - 2) = 4(3x + 6)$

14. $5(3x - 2) = 7(2x - 1)$



This page is to be used to reflect on your learning!

What topics am I happy with:

What topics did I find difficult:

How can I improve the topics I found difficult: