

S1 Block Test Three Revision Booklet MP2



Contents

Angles

More Angles

Symmetry

Area/Perimeter

More Area/Perimeter

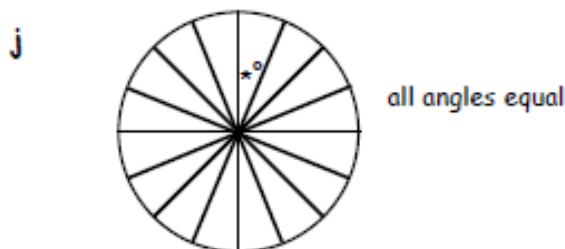
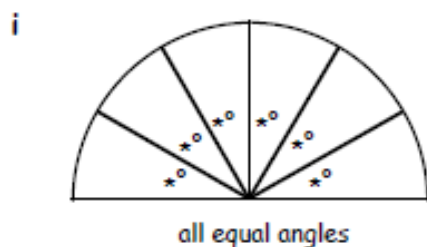
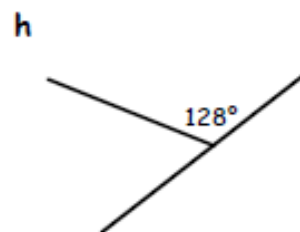
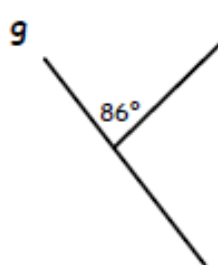
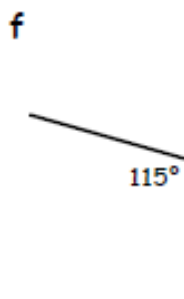
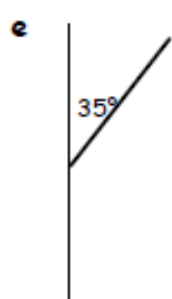
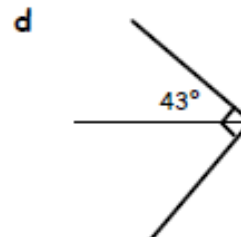
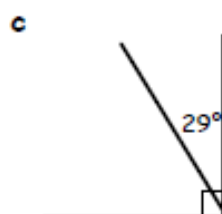
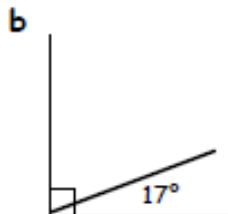
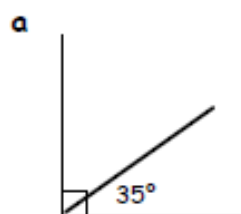
Better Buys

Angles

Exercise 1

Complementary & Supplementary Angles

1. Calculate the missing angles in each of the following :-



2. Write down the complement of :-

a 60°

b 20°

c 37°

d 1°

3. Write down the supplement of :-

a 30°

b 110°

c 77°

d 9.5°

4. What angle is its own :-

a complement

b supplement ?

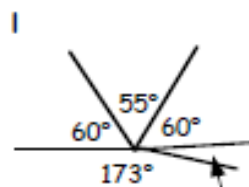
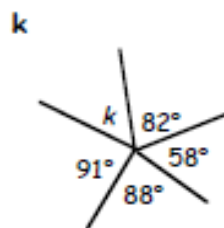
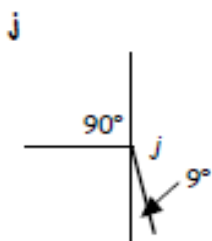
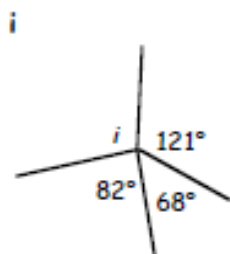
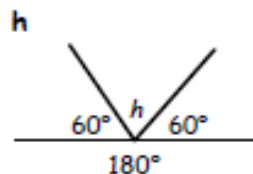
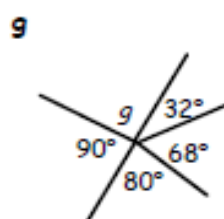
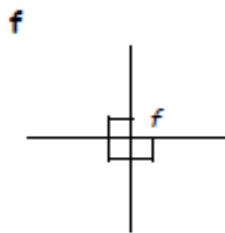
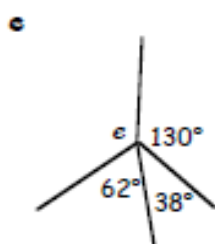
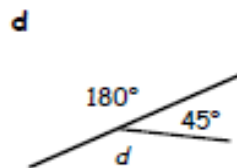
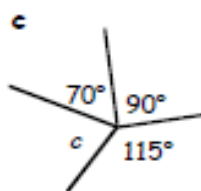
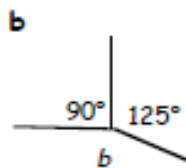
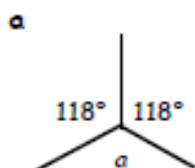
5. What is the **sum** of all the angles round a point ?

Angles

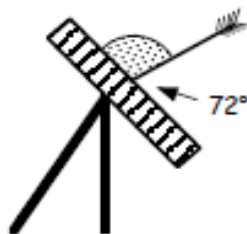
Exercise 2

Angles Round a Point

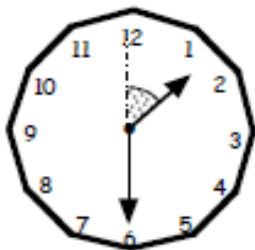
1. Calculate (do not measure) the sizes of the angles marked a , b , c ,



2. An arrow lands on a target as shown. Calculate the size of the shaded angle.



3.



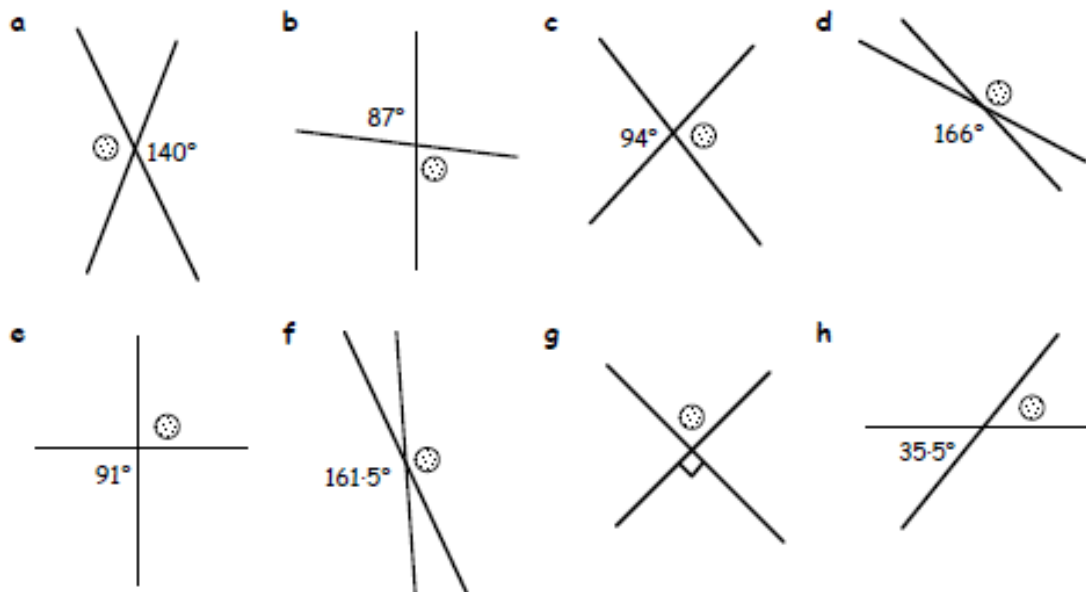
This clock shows a time of 1.30.
Calculate the size of the shaded angle.

4. Five angles round a point are 39° , 122° , 77° , and two unknown equal angles. Find one of the unknown angles.

Angles

Exercise 3 Vertically Opposite Angles

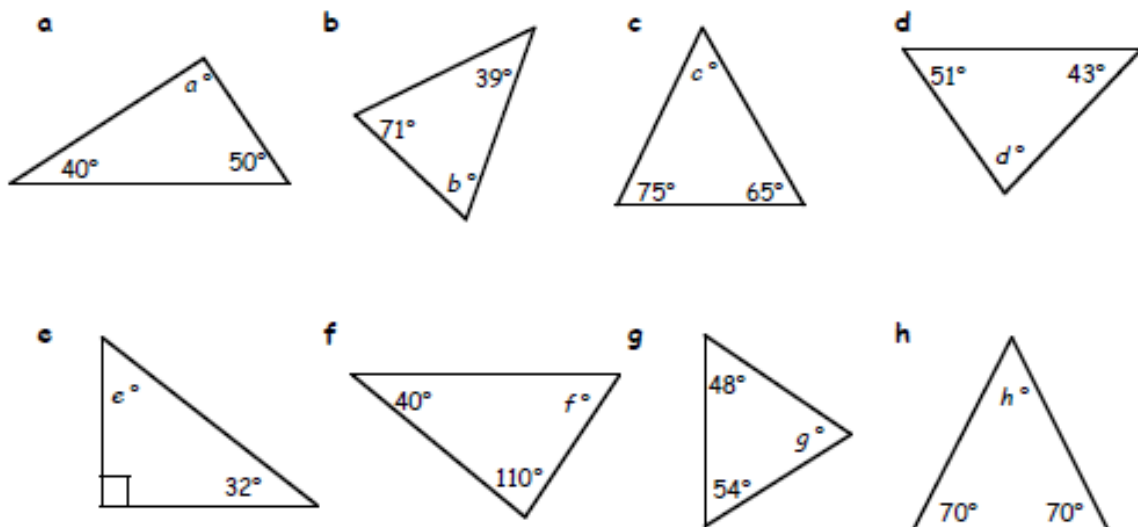
1. Write down the sizes of all the angles marked with a ☉.



2. Sketch all the diagrams above and fill in all the missing angles.

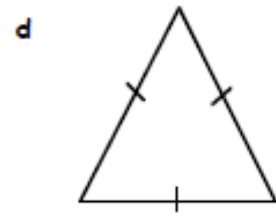
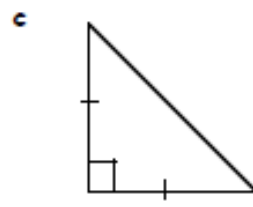
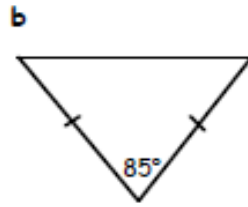
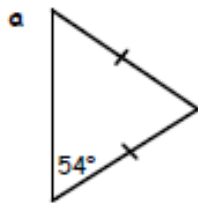
Exercise 4 Angles in a Triangle

1. Calculate the size of the angles marked a , b , c ,

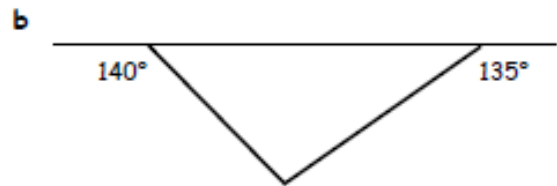
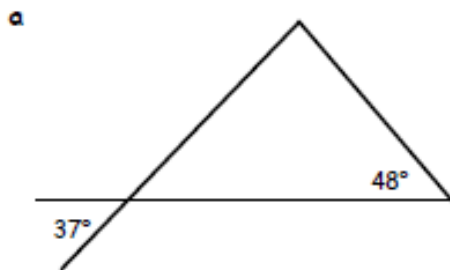


Anales

2. Copy each diagram below and fill in all the missing angles :-



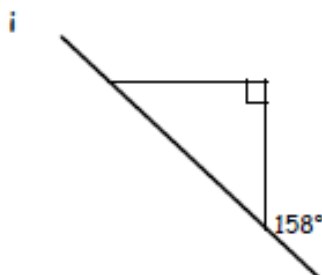
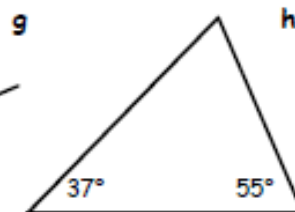
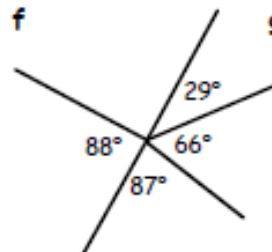
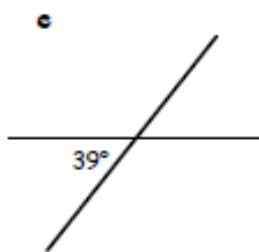
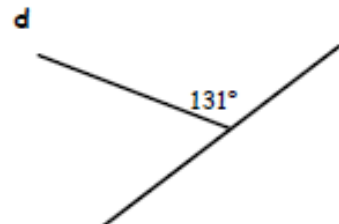
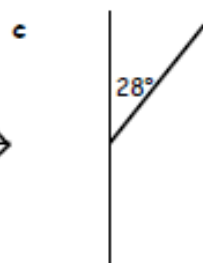
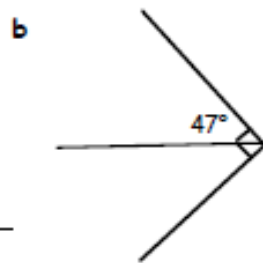
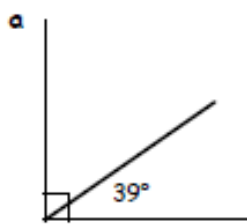
3. Copy each diagram below and fill in all the missing angles :-



Exercise 5

Angles Mixed Exercise

1. Copy all the diagrams below filling in all missing angles :-



Answers

Answers to Chapter 3

Exercise 1 - Complementary & Supplementary Angles

- | | | | |
|---------------|----------------|--------------|--------------|
| a 55° | b 73° | c 61° | d 47° |
| e 145° | f 65° | g 94° | h 52° |
| i 30° | j 22.5° | | |
- | | | | |
|--------------|--------------|--------------|--------------|
| a 30° | b 70° | c 53° | d 89° |
|--------------|--------------|--------------|--------------|
- | | | | |
|---------------|--------------|---------------|-----------------|
| a 150° | b 70° | c 103° | d 170.5° |
|---------------|--------------|---------------|-----------------|
- | | |
|--------------|--------------|
| a 45° | b 90° |
|--------------|--------------|
- | |
|---------------|
| a 360° |
|---------------|

Exercise 2 - Angles Round a Point

- | | | | |
|---------------|---------------|--------------|---------------|
| a 124° | b 145° | c 85° | d 135° |
| e 130° | f 90° | g 90° | h 60° |
| i 89° | j 171° | k 41° | l 12° |
- | |
|---------------|
| a 108° |
|---------------|

- a 45°
- a 61°

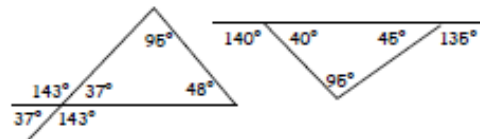
Exercise 3 - Vertically Opposite Angles

- | | | | |
|---------------|-----------------|--------------|----------------|
| a 140° | b 87° | c 94° | d 166° |
| e 91° | f 161.5° | g 90° | h 35.5° |

2. See drawings

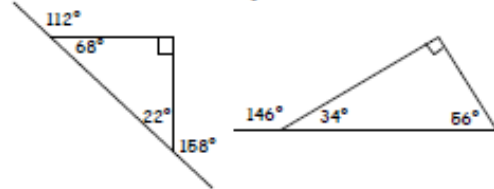
Exercise 4 - Angles in a Triangle

- | | | | |
|--------------|--------------|--------------|--------------|
| a 90° | b 70° | c 40° | d 86° |
| e 58° | f 30° | g 78° | h 40° |
- | | |
|------------------------|----------------------------------|
| a $54^\circ, 72^\circ$ | b $47.5^\circ, 47.5^\circ$ |
| c $45^\circ, 45^\circ$ | d $60^\circ, 60^\circ, 60^\circ$ |
- | | |
|---|---|
| a | b |
|---|---|



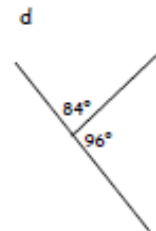
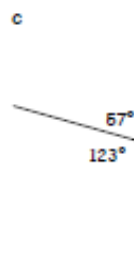
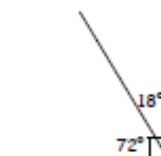
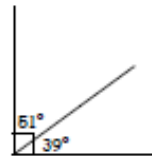
Exercise 5 - Mixed Exercise

- | | | | |
|-------------------------|--------------|---------------|--------------|
| a 51° | b 43° | c 152° | d 49° |
| e $39^\circ, 141^\circ$ | f 90° | g 88° | h 76° |
| i | j | | |



Review - Revisit - Revise Exercise 3

- | | |
|--------------|--------------|
| a 25° | b 65° |
|--------------|--------------|
- | | |
|---|---|
| a | b |
|---|---|



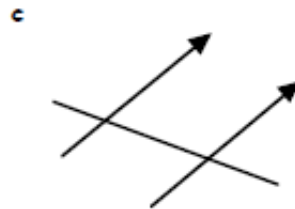
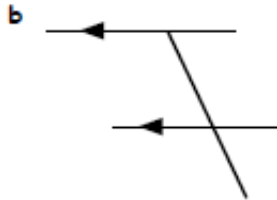
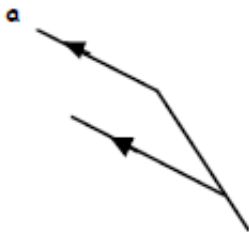
More Angles

Exercise 1

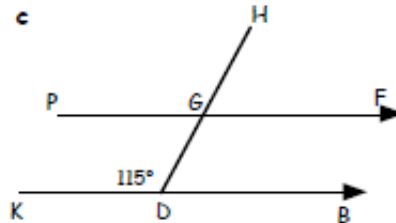
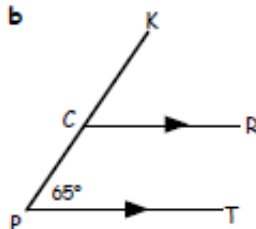
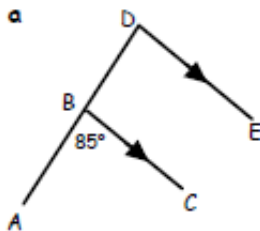
Corresponding Angles



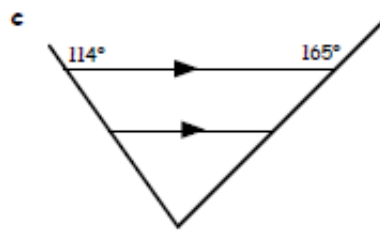
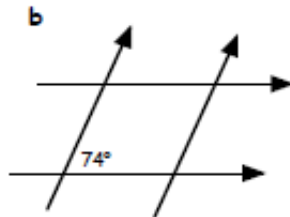
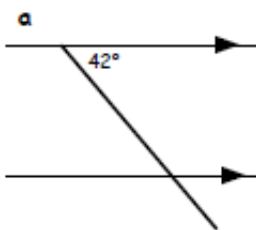
- Copy and complete :- Corresponding (F) angles are e.....
- Copy the diagrams and mark all the corresponding (F) angles with a * :-



- Write down the sizes of all the angles in the following diagrams :- ($\angle ABC = 85^\circ$).



- Sketch each of the following and fill in all the missing angles :-

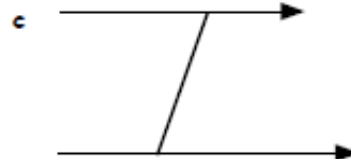
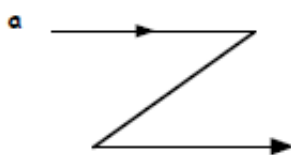


Exercise 2

Alternate Angles

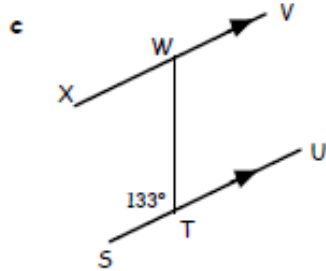
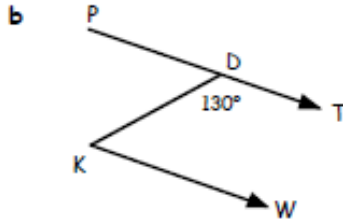
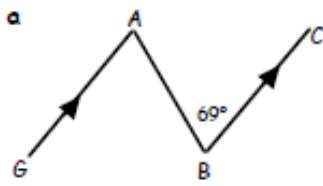


- Copy and complete :- Alternate (Z) angles are e.....
- Copy the diagrams and mark all the alternate (Z) angles with a * :-

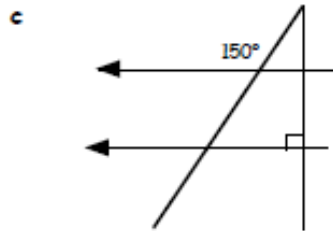
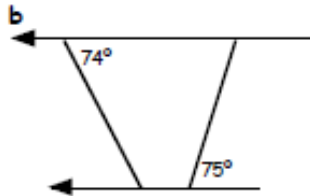
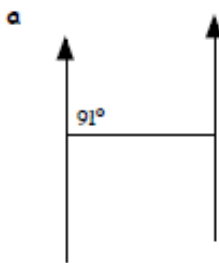


More Angles

3. Write down all the sizes of the angles in the following diagrams :- (e.g. $\angle ABC = 69^\circ$).



4. Sketch each of the following and fill in all the missing angles :-

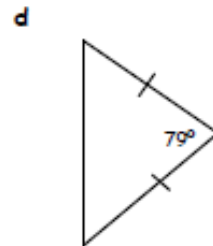
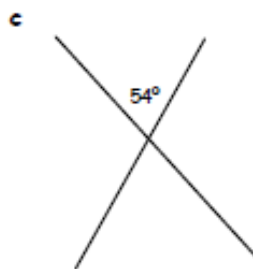
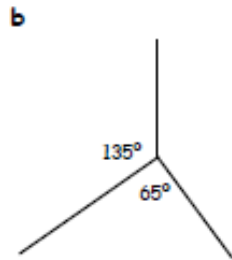
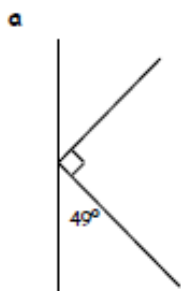


Exercise 3 Mixed Exercise

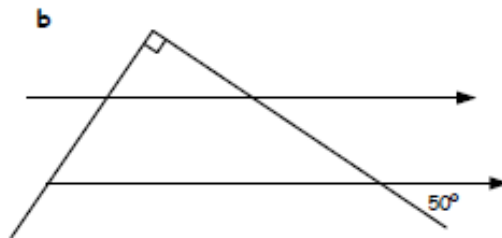
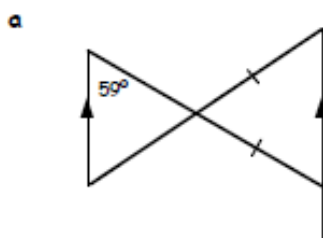


1. Make a neat rough sketch of each of the following diagrams.

Fill in all the missing angles.



2. Sketch each of the following and fill in all the missing angles :-

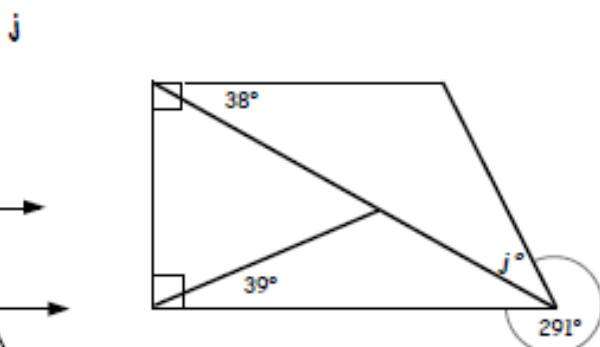
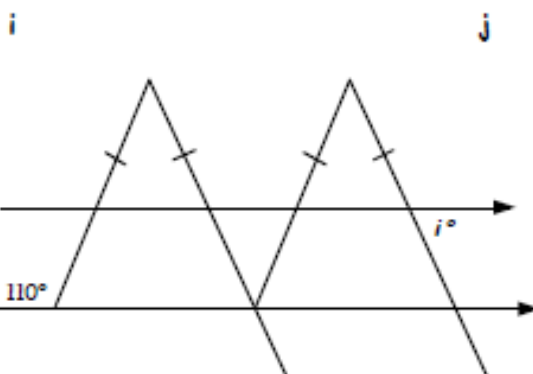
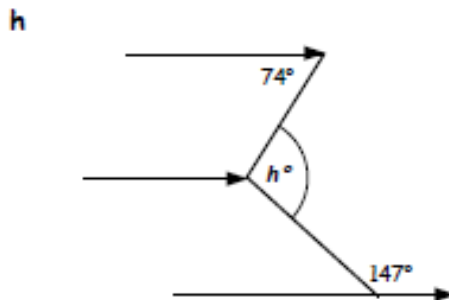
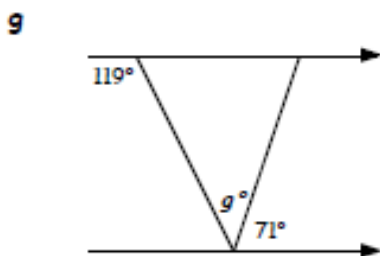
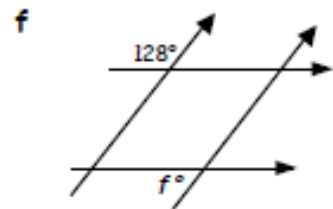
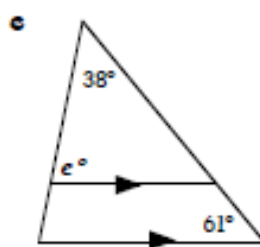
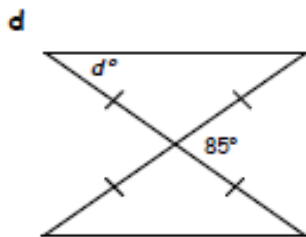
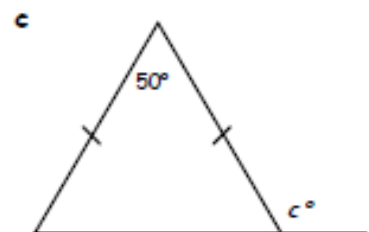
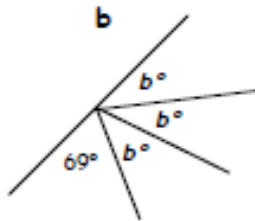
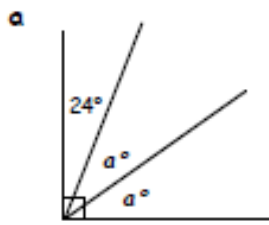


More Angles

1. a What size of angle is complimentary to 34° ?

b Write down the supplement of 85° .

2. Make a neat sketch of each diagram and find the value of each letter :-

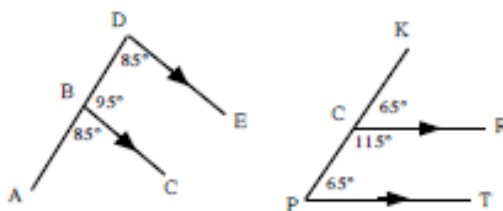


Answers

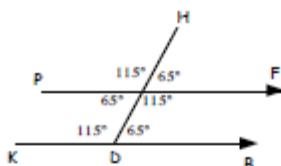
Ch 6 Ex 1 Corresponding Angles

- equal
- Check diagrams
- a

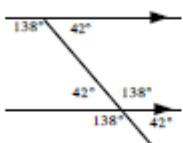
b



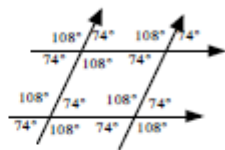
c



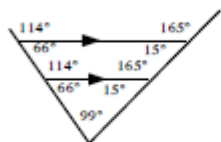
4. a



b



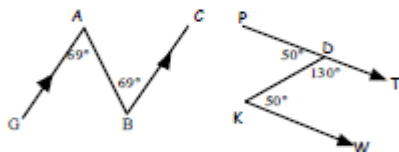
c



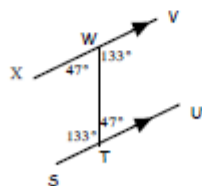
Ch 6 Ex 2 Alternate Angles

- equal
- check diagrams
- a

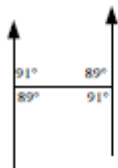
b



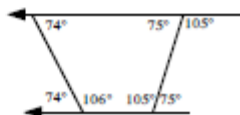
c



4. a

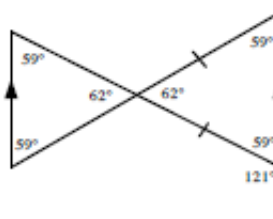


b

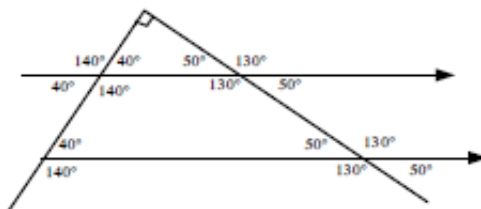


Ch 6 Ex 3 Mixed Exercise

- a 41° b 160°
c 54°, 126°, 126° d 50.5°, 50.5°
- a



b



Ch 6 Revisit - Review - Revise 6

- a 56° b 95°
- a 33° b 37° c 115°
d 42.5° e 81° f 52°
g 48° h 107° i 70°
j 31°

Ch 6 Cumulative Ex 2 (Chapters 1-6)

- a 9 b 169 c 81
d 11 e 2
- small 90p per 50g, large 80p per 50g
large tin is cheaper
- a 60 b 1
- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
- $2 \times 2 \times 2 \times 5 \times 7$
- a $y = 4x - 1$ b $y = x - 5$
- a 5 b 7 c 3
d 1 e 2 f -5
- a $x < 5$ b $x < 4$ c $x \geq 4$
- a $x = 107^\circ$ b $y = 122^\circ$
- 1 didlii - 25000 splinkiis

Symmetry

Exercise 1

Line Symmetry

1. Make a neat tracing of each of the following shapes.

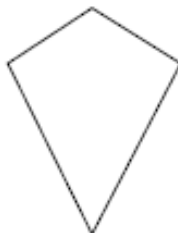
a



b



c



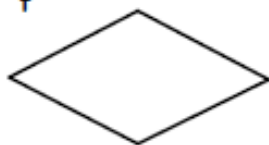
d



e



f



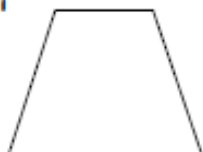
g



h



i



j



k



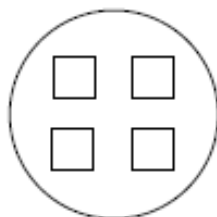
l



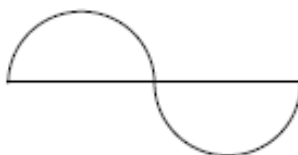
m



n



o



2. a For each shape you have traced (or copied) show all lines of symmetry.

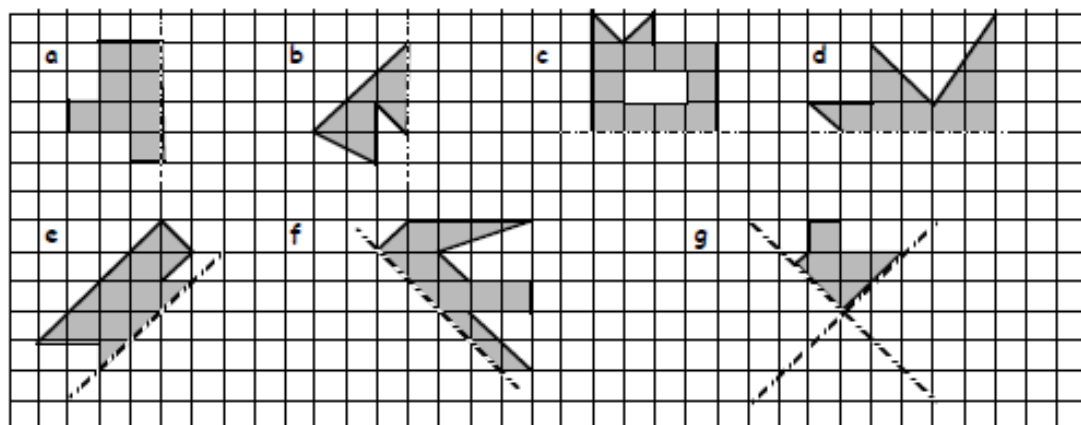
b Write down next to each shape how many lines of symmetry it has.

3. Make a list of those capital letters of the alphabet that have lines of symmetry.

A B C

Symmetry

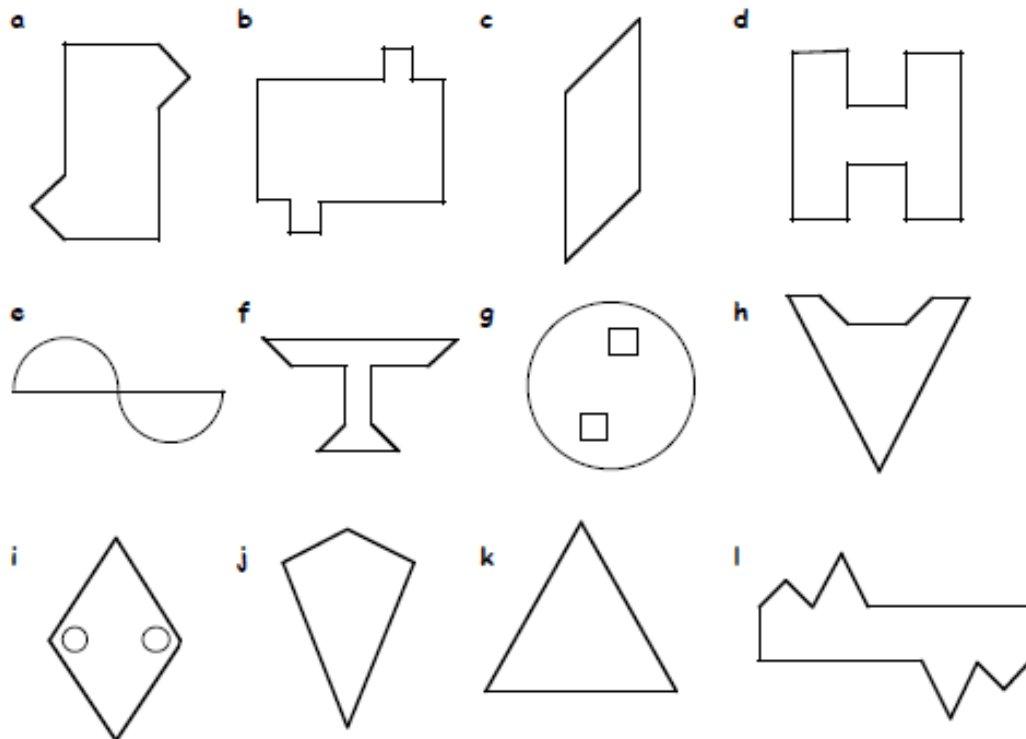
4. Copy each of the following shapes neatly and complete each one such that the dotted line is a line of symmetry each time.



Exercise 2

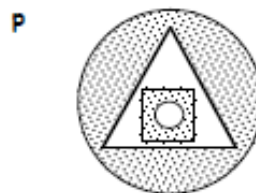
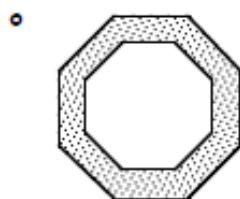
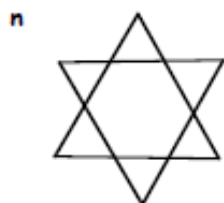
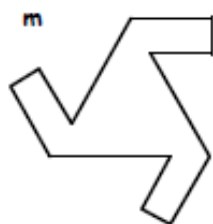
Rotational Symmetry

1. Which of the following shapes have **half-turn** symmetry? (Answer yes or no).



continues over the page ...

Symmetry



2. For each shape in Question 1, state the **order** of symmetry.
3. a Which seven capital letters of the alphabet have $\frac{1}{2}$ -turn symmetry?

A B C

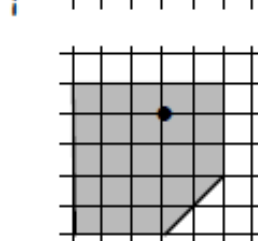
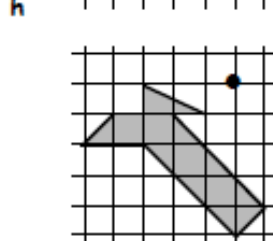
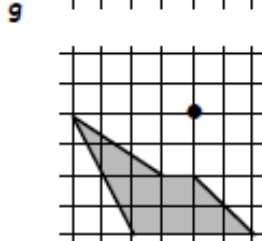
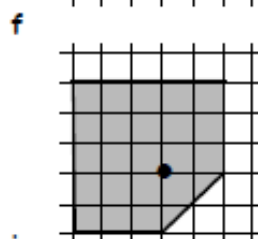
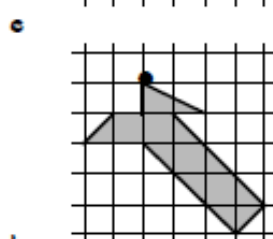
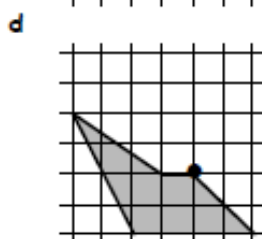
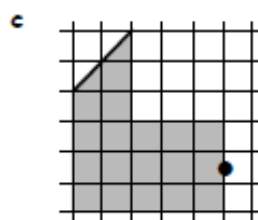
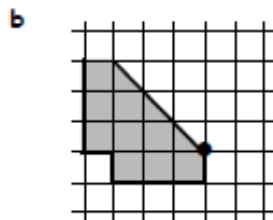
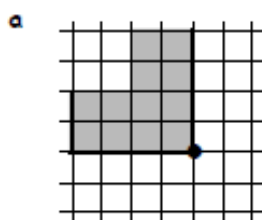
- b Of these seven letters, only three do **not** have a line of symmetry.
Which three?

Exercise 3

Creating a Shape with Half-turn Symmetry

1. Make a copy of each of the following shapes.

Create a shape which has half turn symmetry by rotating each shape by 180° about the dot.

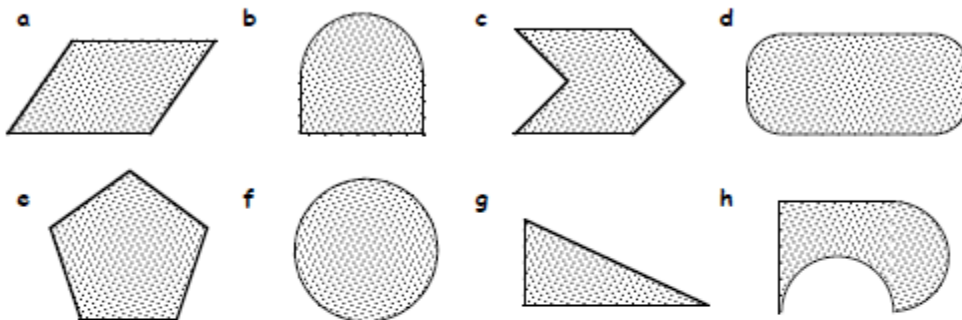


Symmetry

Exercise 4

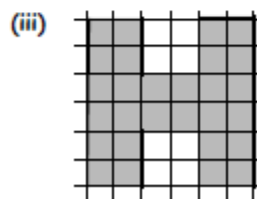
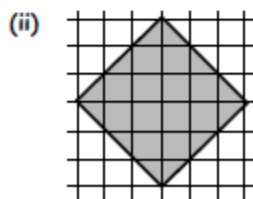
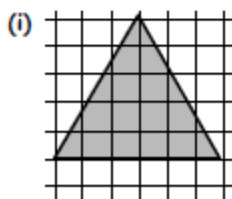
Translation (Slide) Symmetry

1. Which of the following shapes would not "tile the plane".



2. a Draw each shape shown below and shade it in.

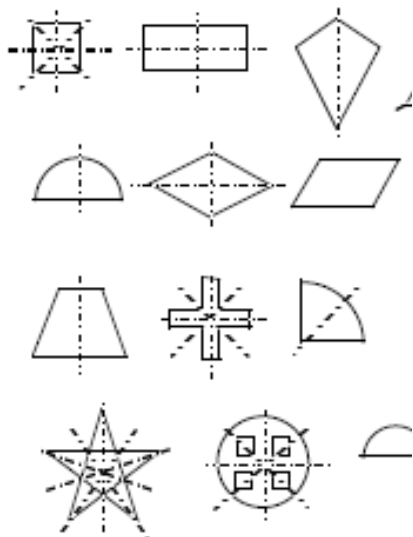
b Tile the plane using 6-8 congruent tiles



Answers

Ch 11 Ex 1 Line Symmetry

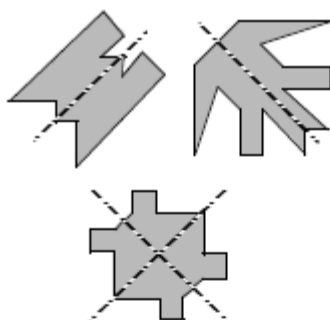
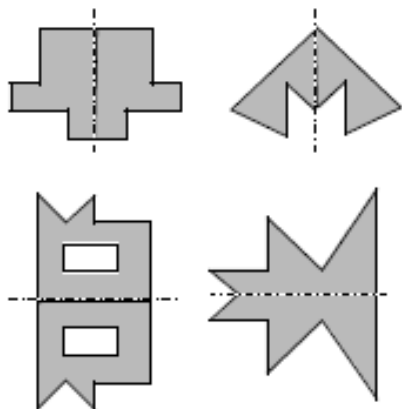
1.



2. a 4 b 2 c 1
 d 3 e 1 f 2
 g 0 h 6 i 1
 j 4 k 1 l 1
 m 5 n 4 o 0

3. A, B, C, D, E, H, I, K, M, O, (Q), T, U, V, Y

4.

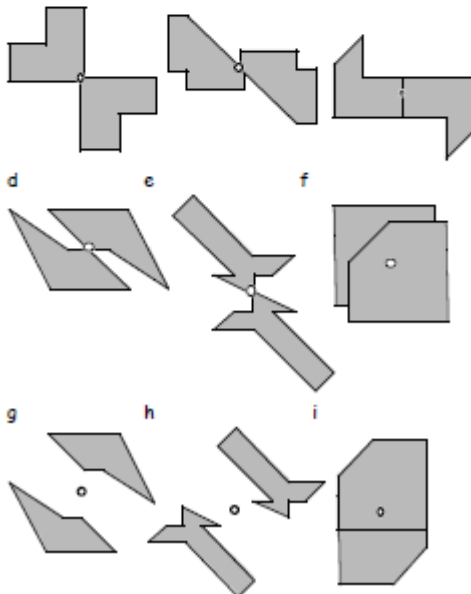


Ch 11 Ex 2 Rotational Symmetry

1. a yes b yes c yes
 d yes e yes f no
 g yes h no i yes
 j no k no l yes
 m no n yes o yes
 p no
2. a $1/2, 2$ b $1/2, 2$ c $1/2, 2$
 d $1/2, 2$ e $1/2, 2$ f --
 g $1/2, 2$ h -- i $1/2, 2$
 j -- k $1/3, 3$ l $1/2, 2$
 m $1/3, 3$ n $1/6, 6$ o $1/8, 8$
3. a H, I, N, O, S, X, Z b N, S, Z

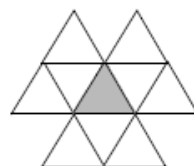
Ch 11 Ex 3 Half-turn Symmetry

1. a b c

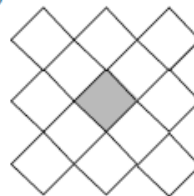


1. b d f

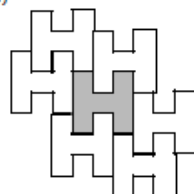
2. (i)



(ii)



(iii)

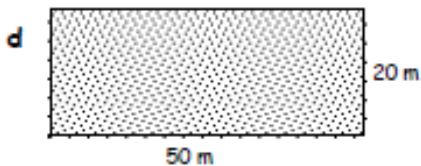
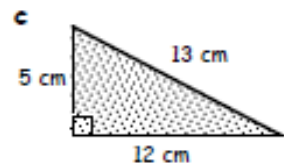
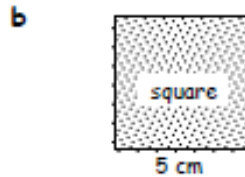
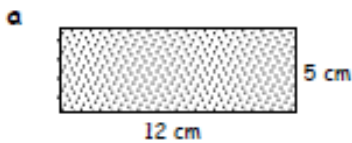


Area/Perimeter

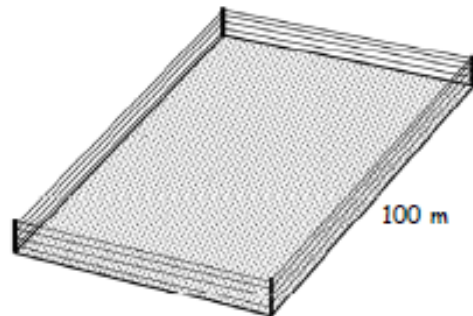
Exercise 1 Perimeter & Area



1. Calculate :- (i) the perimeter (ii) the area of each shape below :-



2. Four strips of electrical wire fence surround a rectangular field with area 8000 square metres.
- Find the width of the field given that the length is 100 metres.
 - What is the total length of wire needed ?
 - The wire costs 18p per metre.
How much will the wire cost in total ?



Answers

Exercise 1 - Perimeter & Area

1. a (i) 34 cm (ii) 60 cm^2
b (i) 20 cm (ii) 25 cm^2
c (i) 30 cm (ii) 30 cm^2
d (i) 140 m (ii) 1000 m^2
e (i) 440 cm (ii) 4000 cm^2
2. a 80 m b 1440 m c £259.20

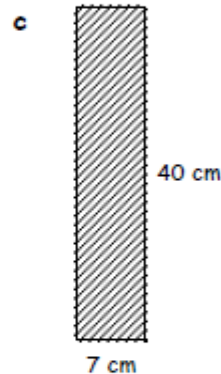
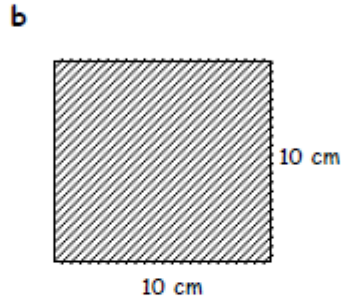
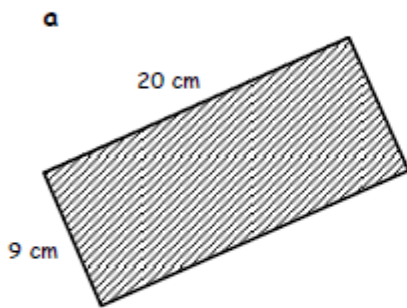


More Area/Perimeter

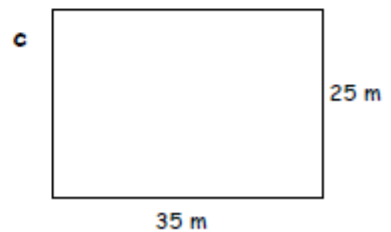
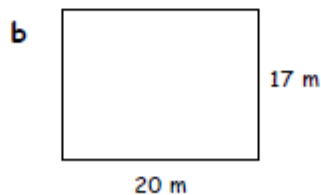
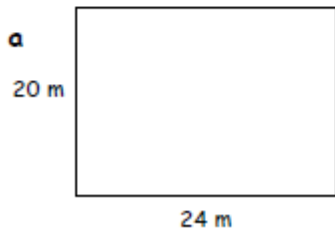
Exercise 1



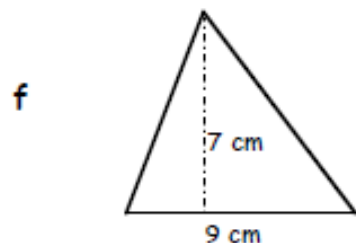
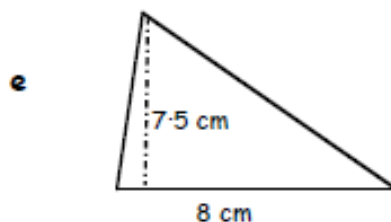
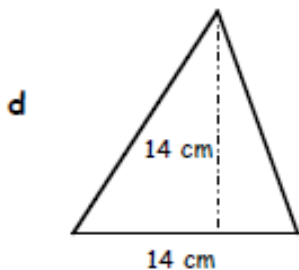
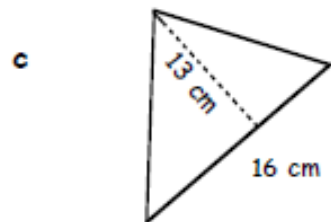
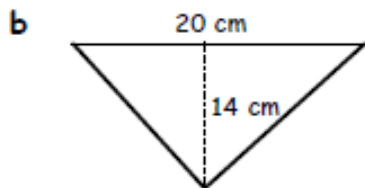
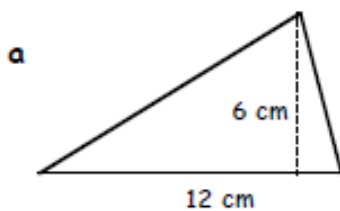
1. Calculate the area of each of the following rectangles.
 (In each case, make a small "sketch" of the rectangle, write down the rule " $A = L \times B$ " and calculate the area, in cm^2).



2. Calculate the area of carpet needed for each of these assembly halls :-



2. Use the formula $\text{Area} = \frac{1}{2}(L \times B)$ each time to calculate the areas of the following triangles (make a neat sketch of each triangle) :-



More Area/Perimeter

Exercise 1

1. a 180 cm^2 b 100 cm^2 c 280 cm^2

2. a 480 m^2 b 340 m^2 c 875 m^2

2. a 36 cm^2 b 140 cm^2 c 104 cm^2

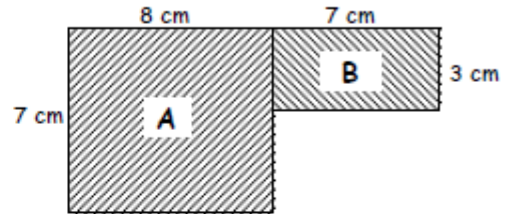
d 84 cm^2 d 30 cm^2 f 31.5 cm^2

More Area/Perimeter

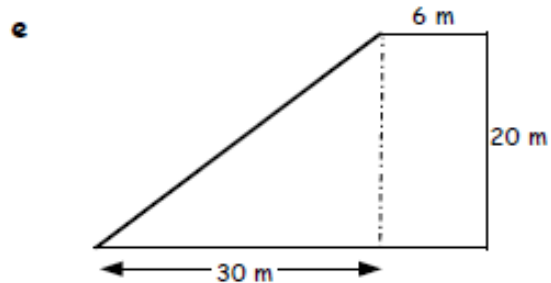
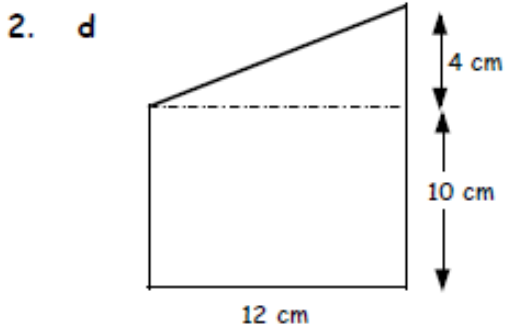
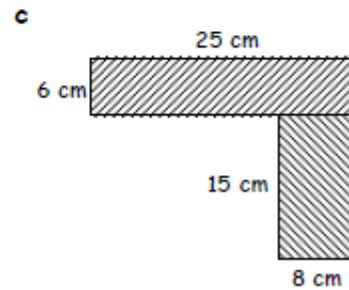
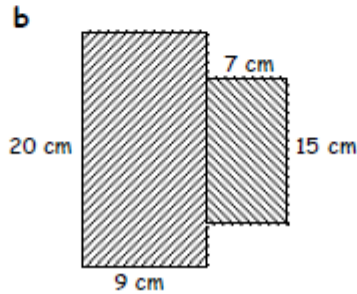
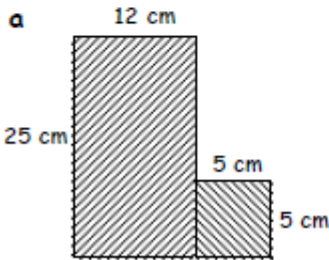
Exercise 4



1. a Calculate the area of the big rectangle (A).
- b Calculate the area of the small rectangle (B).
- c Calculate the **total** area of the shape.



2. For each of these :-
 - (i) Make a neat sketch.
 - (ii) Calculate the area of each part (show working).
 - (iii) Calculate the area of the whole shape.



More Area/Perimeter

Exercise 4

1. a 56 cm^2 b 21 cm^2 c 77 cm^2
2. a 325 cm^2 b 285 cm^2 c 270 cm^2
d 144 cm^2 e 420 cm^2

Better Buys

Exercise 2

Best Buys - Money Management

1. A tin of dog food is offered in two different sizes.
- The small tin costs £3.45 for 600 grams.
 - The large tin costs £6 for one kilogram.

Which one is the better deal? Explain.



2. Which is the better deal for each of the following and explain your answers?
- a A box of fudge costs £3.99 for a 475 gram box or £5.20 for a 650 gram box.
- b Tennis balls - box of 9 for £19.26 or box of 12 for £25.68.

3. Cartons of apple juice are sold in different sizes.

Which is the best deal? Explain.

450 ml costs	-	81p
1 litres costs	-	£1.60
2.5 litres costs	-	£3.50



Answers

Ch 2 Ex 2 Best Buys - Money Management

1. Small 57.5p per 100g Large 60p per 100g
Small tin better value
2. a small 21p per 25g, large 20p per 25g.
Larger is cheaper.
b 9 box €2.14 each, 12 box €2.14. Same price.
3. 450 ml 9p per 50 ml, 1l 8p per 50 ml,
2.5 l 7p per 50 ml. Largest is best