S1 Block Test Three Revision Booklet
MP1

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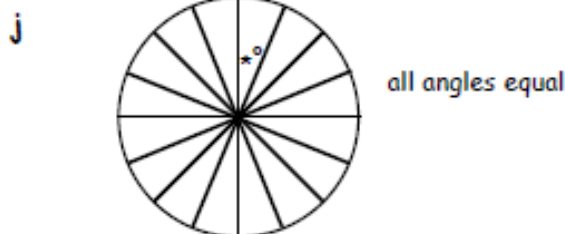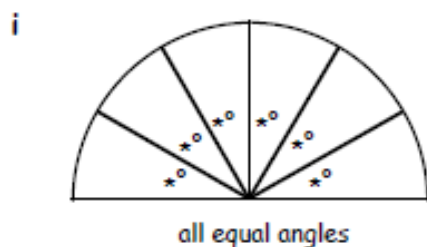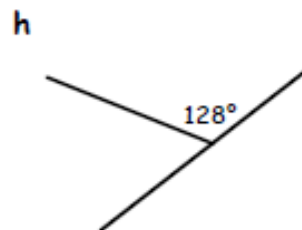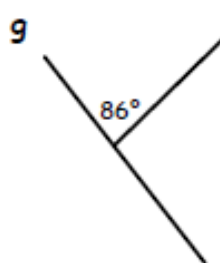Better Buys

Angles

Complementary & Supplementary Angles

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

a

b

c

d

$35°$

$17°$

$29°$

$43°$

e

f

g

h

$35°$

$115°$

$86°$

$128°$

i

j

all equal angles
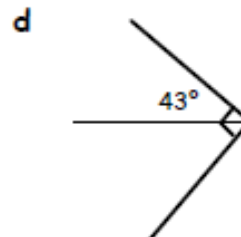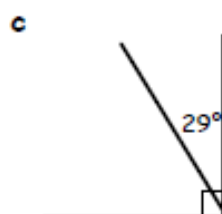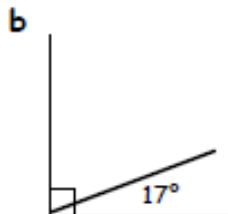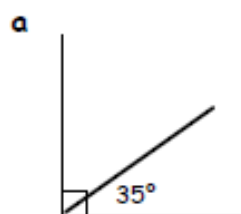
all angles equal
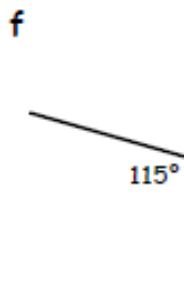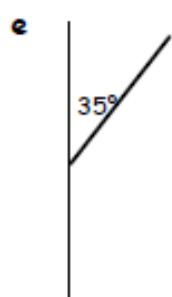
2. Write down the complement of :-

   a 60°   b 20°   c 37°   d 1°.

3. Write down the supplement of :-

   a 30°   b 110°   c 77°   d 9·5°.

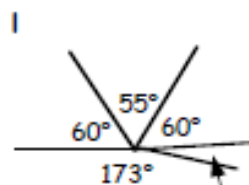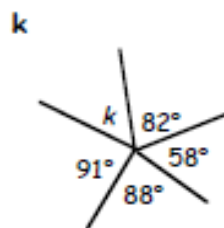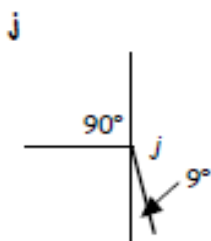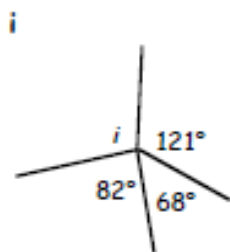4. What angle is its own :-   a complement   b supplement ?

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

Angles

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

a

118° 118°
a

b

90° 125°
b

c

70° 90°
c
115°

d

180°
45°
d

e

e 130°
62° 38°

f

f

g

g 32°
90° 68°
80°

h

60° h 60°
180°

i

i 121°
82° 68°

j

90°
j
9°

k

k 82°
91° 58°
88°

l

55°
60° 60°
173°
l
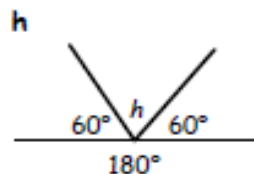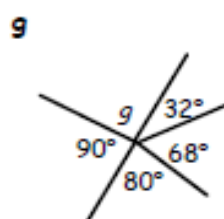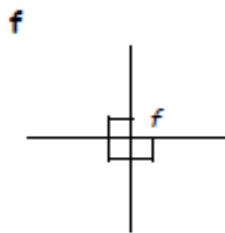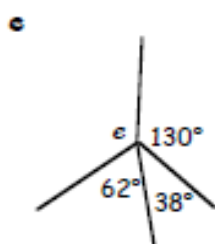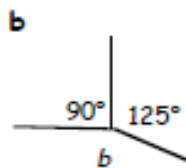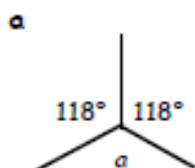
2.   An arrow lands on a target as shown.
     Calculate the size of the shaded angle.

72°
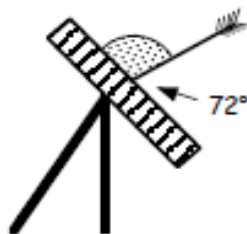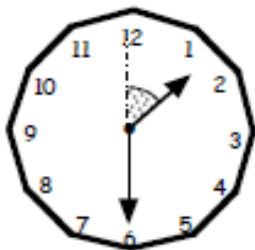
3.   This clock shows a time of 1.30.
     Calculate the size of the shaded angle.
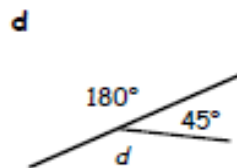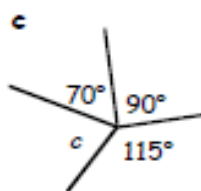
4.   Five angles round a point are 39°, 122°, 77°, and two unknown **equal** angles.
     Find one of the unknown angles.

Angles

Vertically Opposite Angles

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

a   b   c   d

140°   87°   94°   166°

e   f   g   h

91°   161·5°   35·5°

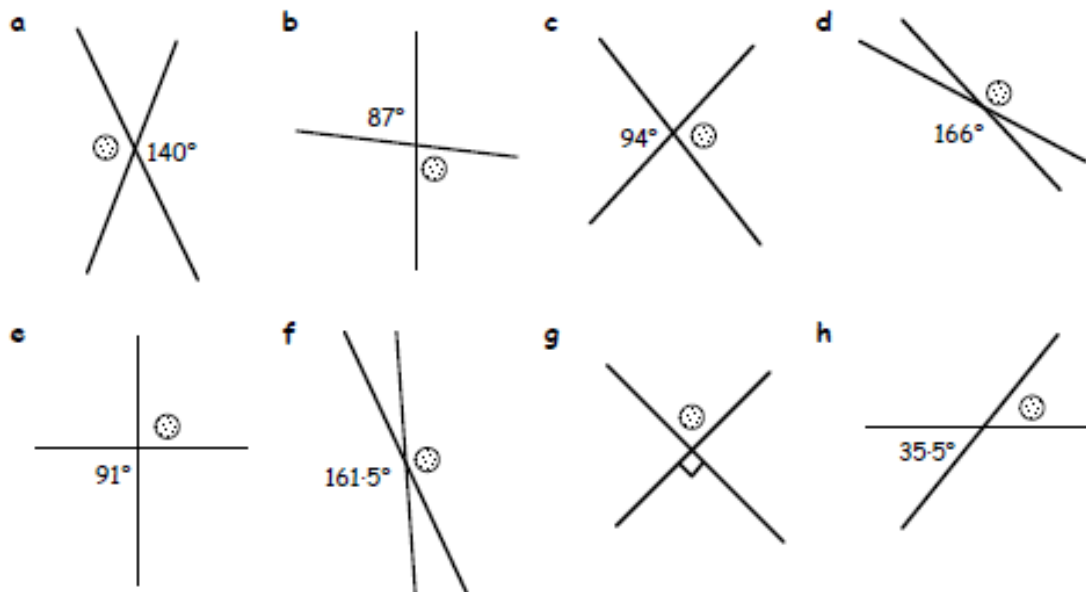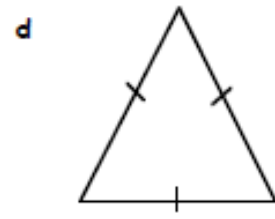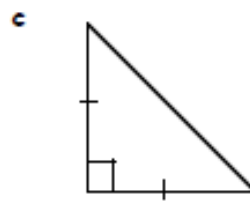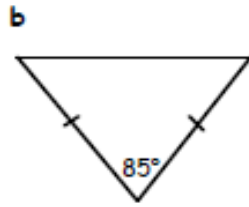2. Sketch all the diagrams above and fill in **all** the missing angles.

Angles in a Triangle

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

a   b   c   d

$a°$ 39° $c°$ 51°   43°

40°   50°   71°   75°   65° $d°$

         $b°$

e   f   g   h

$e°$ 40° $f°$ 48° $h°$

32°   110° $g°$ 70°   70°

                  54°
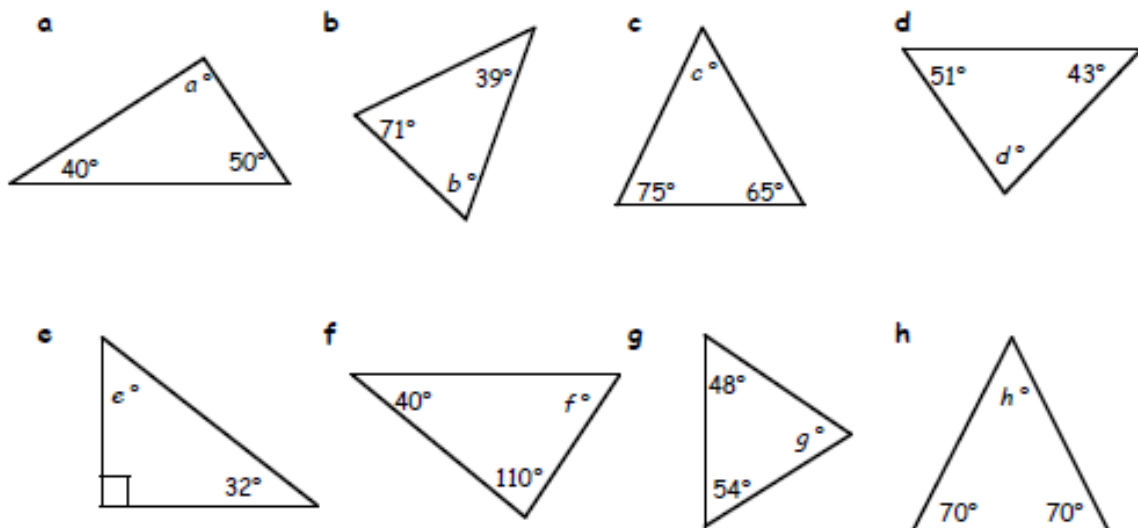
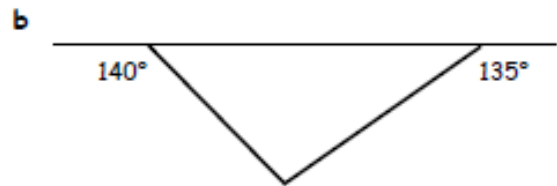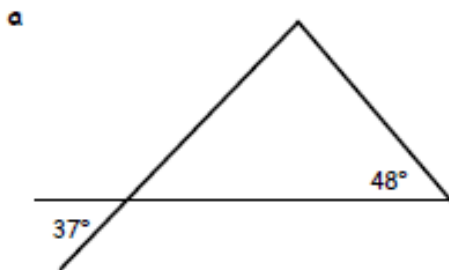# Anales

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

a   b   c   d
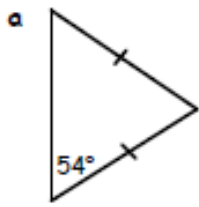
3. Copy each diagram below and fill in all the missing angles :-

a   b

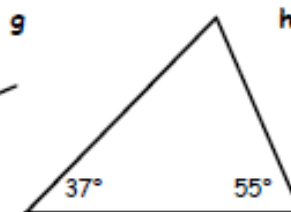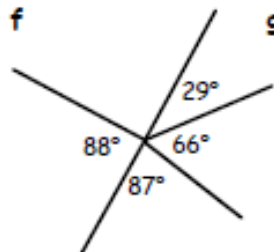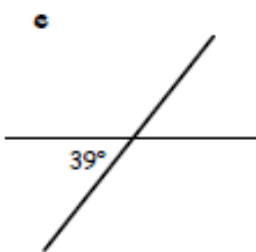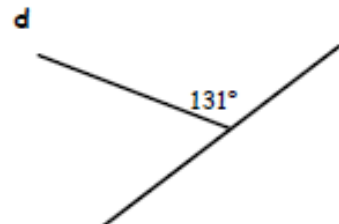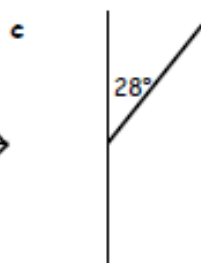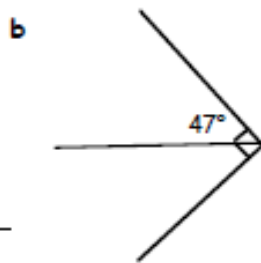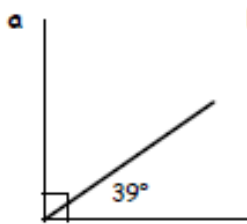## Exercise 5   Angles Mixed Exercise

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

a   b   c   d

e   f   g   h

i   j
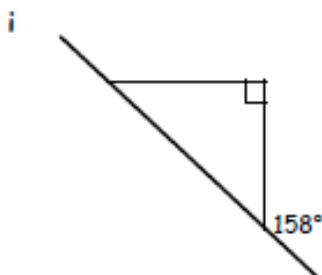
Answers

Answers to Chapter 3

Exercise 1 - Complementary & Supplementary Angles

1. a 55°   b 73°   c 61°   d 47°
   e 145°   f 65°   g 94°   h 52°
   i 30°   j 22·5°
2. a 30°   b 70°   c 53°   d 89°
3. a 150°   b 70°   c 103°   d 170·5°
4. 45°   b 90°
5. 360°

Exercise 2 - Angles Round a Point

1. a 124°   b 145°   c 85°   d 135°
   e 130°   f 90°   g 90°   h 60°
   i 89°   j 171°   k 41°   l 12°
2. 108°

3. 45°
4. 61°

Exercise 3 - Vertically Opposite Angles

1. 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

1. a 90°   b 70°   c 40°   d 86°
   e 58°   f 30°   g 78°   h 40°
2. a 54°, 72°   b 47·5°, 47·5°
   c 45°, 45°   d 60°, 60°, 60°
3. a   b
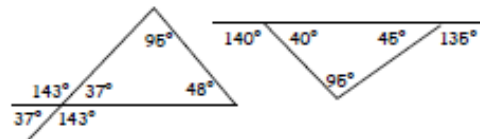
Exercise 5 - Mixed Exercise

1. a 51°   b 43°   c 152°   d 49°
   e 39°,141° f 90° g 88°   h 76°
   i   j
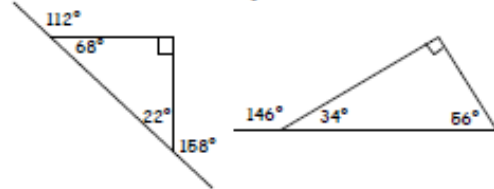
Review - Revisit - Revise Exercise 3

1. a 25°   b 65°
2. a   b

   c   d
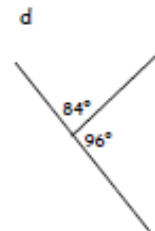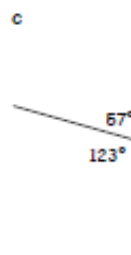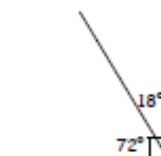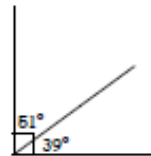
More Angles

1.   Copy and complete :-   Corresponding (F) angles are e......

2.   Copy the diagrams and mark all the corresponding (F) angles with a * :-

a   b   c
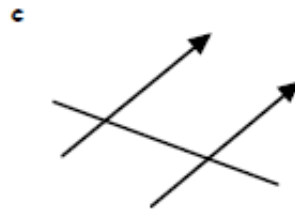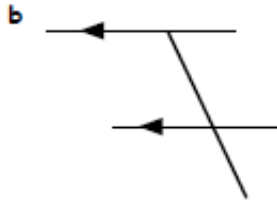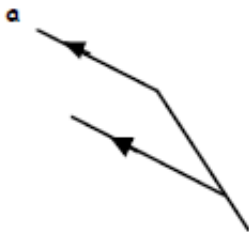
3.   Write down the sizes of all the angles in the following diagrams :- (∠ABC = 85°).
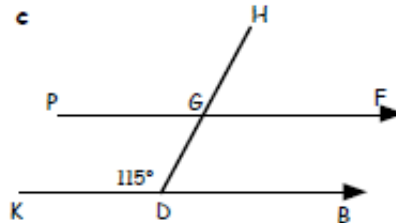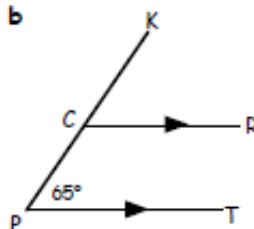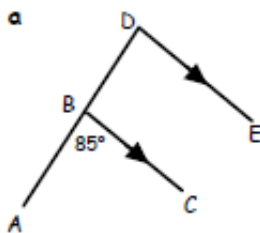
a   b   c

85°   65°   115°

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

a   b   c

42°   74°   114°   165°
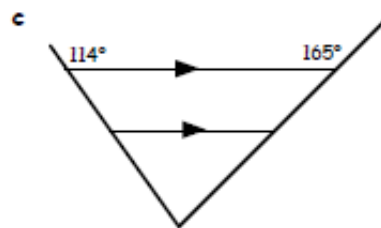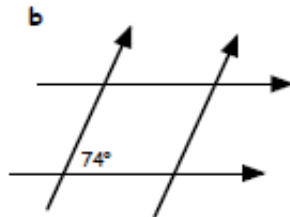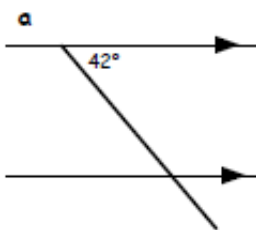
1.   Copy and complete :-   Alternate (Z) angles are e.......

2.   Copy the diagrams and mark all the alternate (Z) angles with a * :-

a   b   c
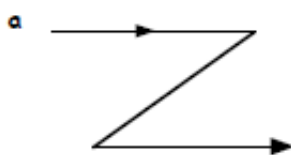
More Angles

3. Write down all the sizes of the angles in the following diagrams :- (e.g. ∠ABC = 69°).

a

A

C

69°

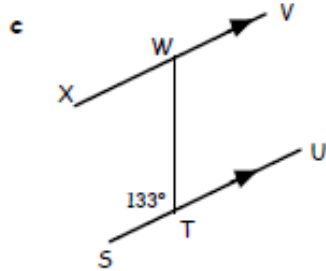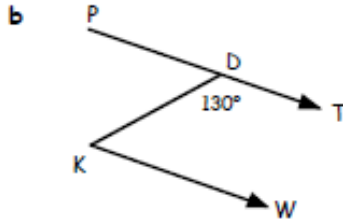G   B

b

P

D

130°

T

K

W

c

V

W

X

U

133°

T

S

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

a

91°

b

74°

75°

c

150°
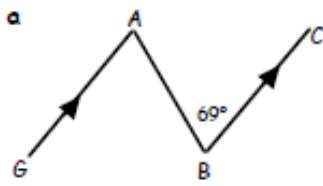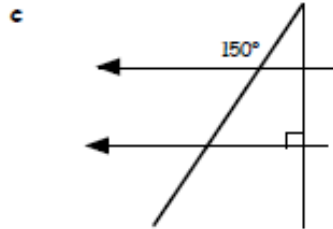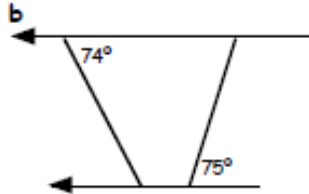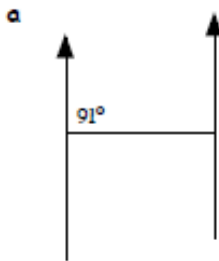
Exercise 3   **Mixed Exercise**   ✗

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

Fill in all the missing angles.

a

49°

b

135°

65°

c

54°

d

79°
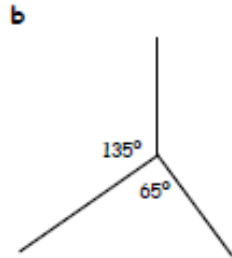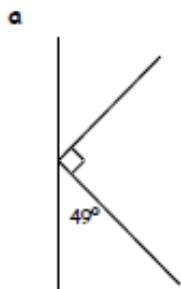
2. Sketch each of the following and fill in all the missing angles :-

a

59°

b

50°
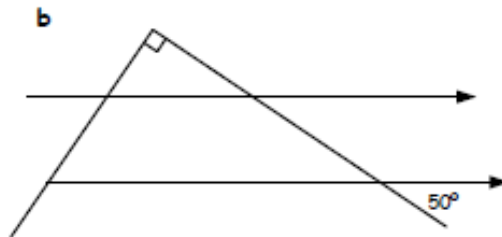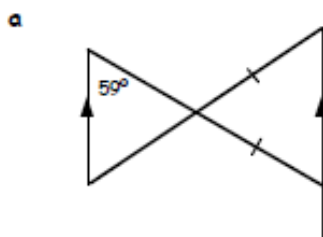
More Angles

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 :-

a

24°
a°
a°

b

b°
b°
69° b°

c

50°
c°

d

d°
85°

e

38°
e°
61°

f

128°
f°

g

119°
g°
71°

h

74°
h°
147°

i

110°
i°

j

38°
39°
j°
291°
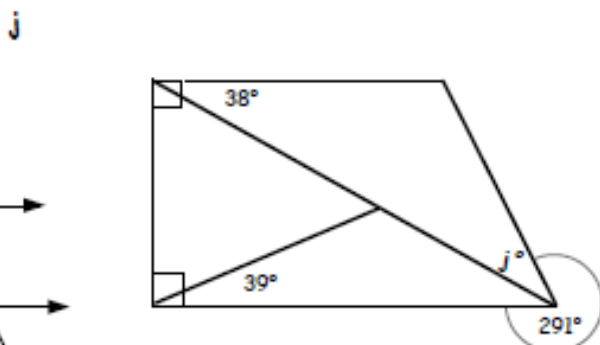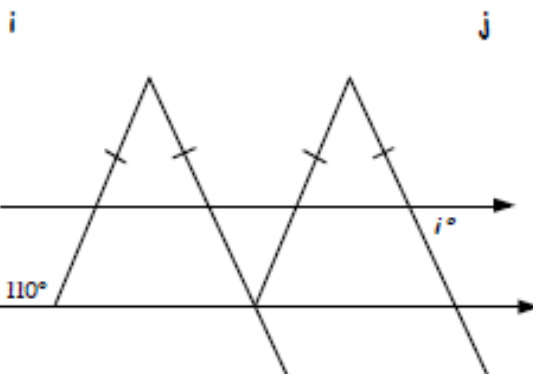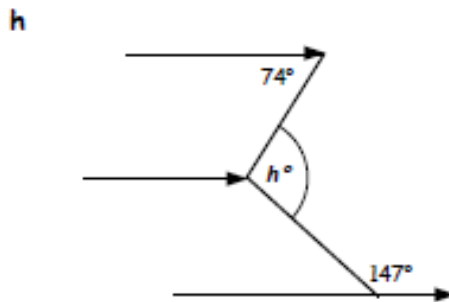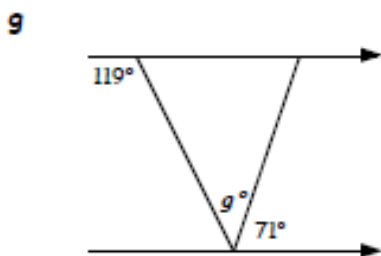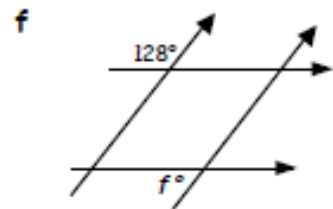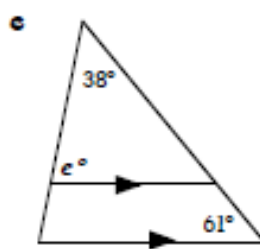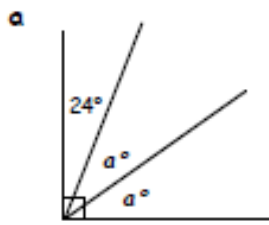
Answers

Ch 6   Ex 1   Corresponding Angles

1. equal
2. Check diagrams
3. a

   b
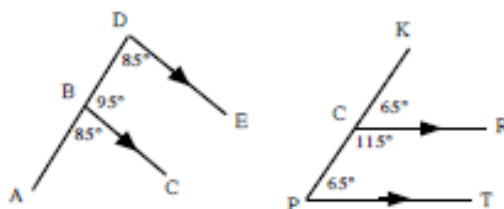
c
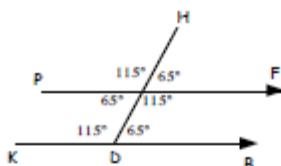
4. a
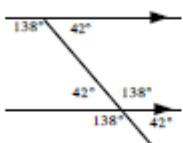
   b
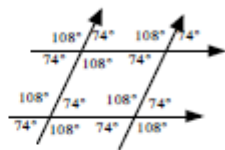
c
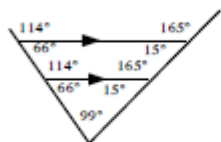
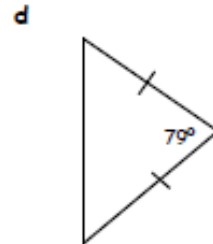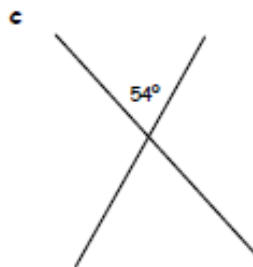## Ch 6   Ex 2   Alternate Angles

1. equal
2. check diagrams
3. a

   b
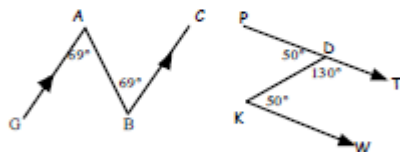
c
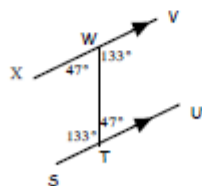
4. a
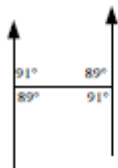
   b
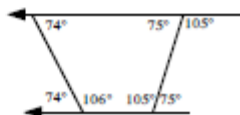
Ch 6   Ex 3   Mixed Exercise

1. a 41°   b 160°
   c 54°, 126°, 126°   d 50·5°, 50·5°
2. a
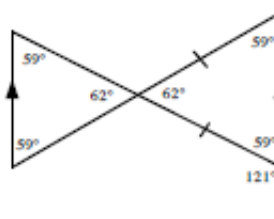
   b
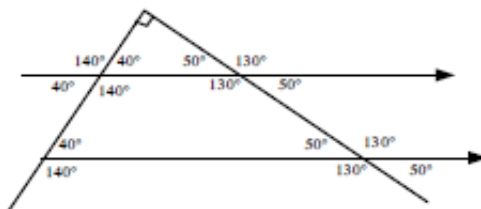
Ch 6   Revisit – Review – Revise 6

1. a 56°   b 95°
2. 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)

1. a 9   b 169   c 81
   d 11   e 2
2. small 90p per 50g, large 80p per 50g
   large tin is cheaper
3. a 60   b 1
4. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
5. 2 x 2 x 2 x 5 x 7
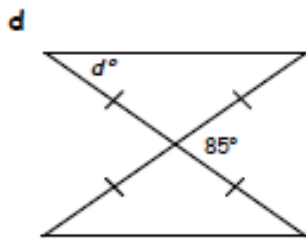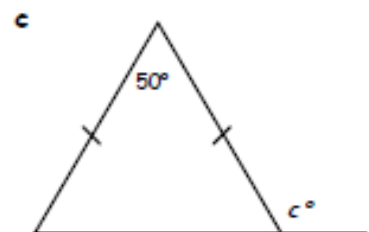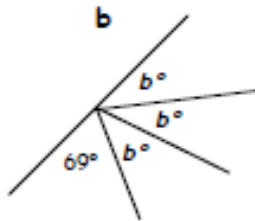6. a y = 4x – 1   b y = x – 5
7. a 5   b 7   c 3
   d 1   e 2   f -5
8. a x < 5   b x < 4   c x ≥ 4
9. a x = 107°   b y = 122°
10. 1 didlii – 25000 splinkiis

Symmetry

1. Make a neat tracing of each of the following shapes.
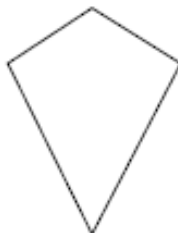
a   b   c   d
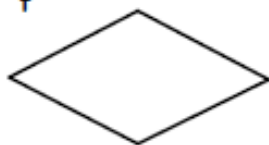
e   f   g   h
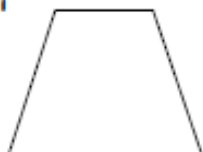
i   j   k   l
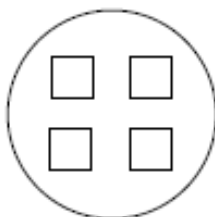
m   n   o
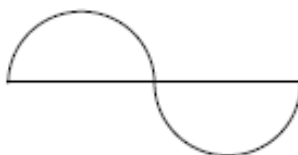
2. a   For each shape you have traced (or copied) show all lines of symmetry.

    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.
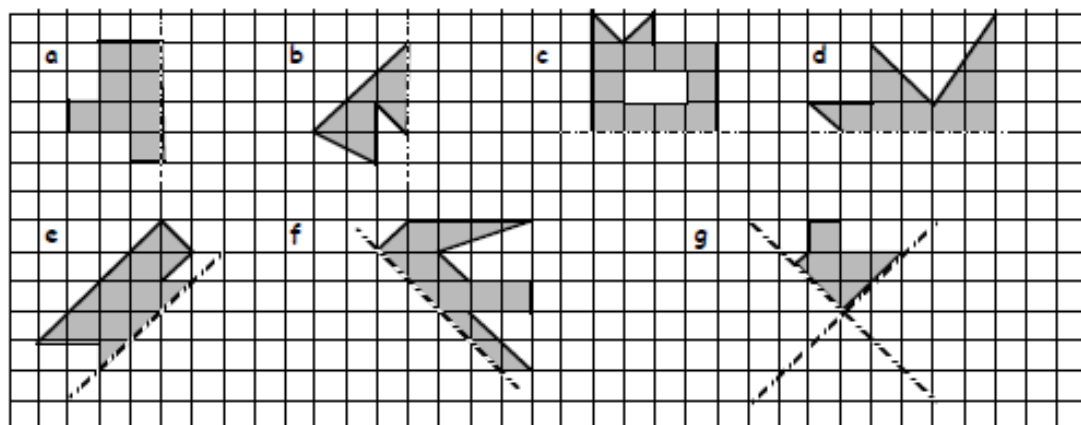
Exercise 2   **Rotational Symmetry**

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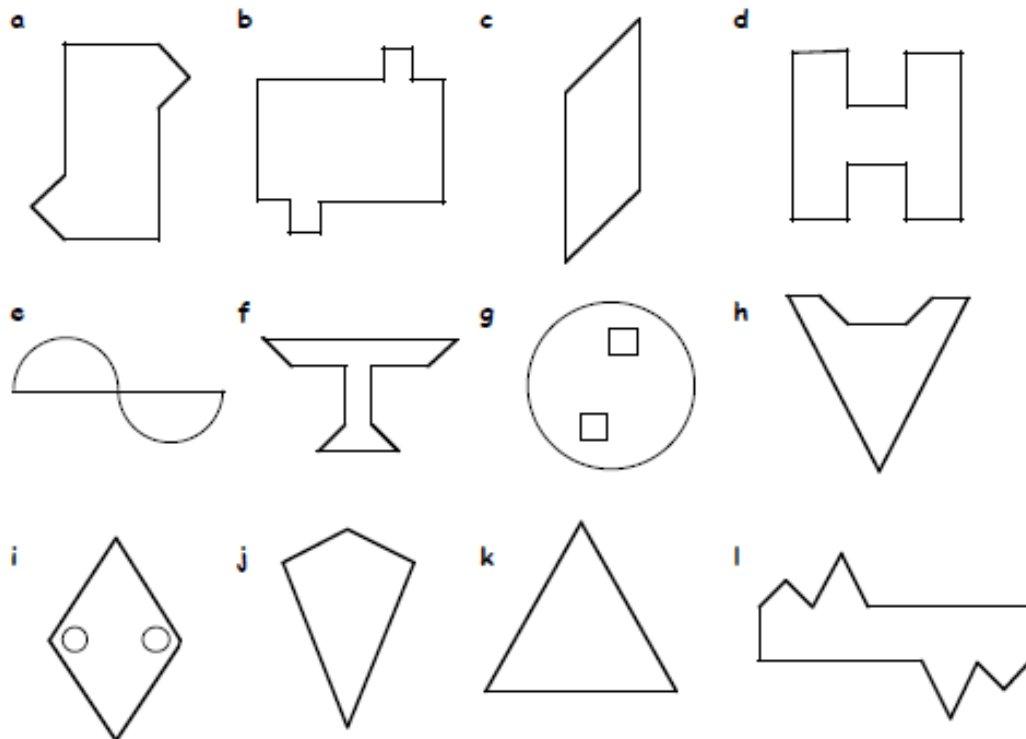
continues over the page ...

Symmetry

m   **n**   **o**   **p**
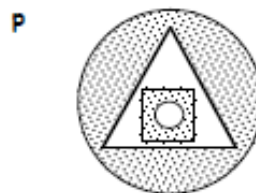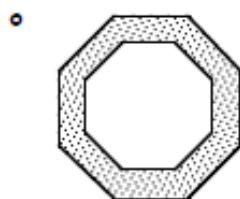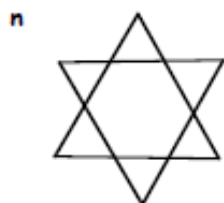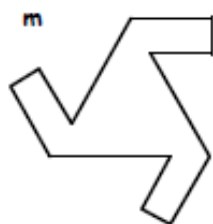
2. For each shape in Question 1, state the **order** of symmetry.

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.

a   **b**   **c**

d   **e**   **f**

g   **h**   **i**
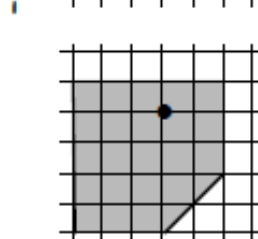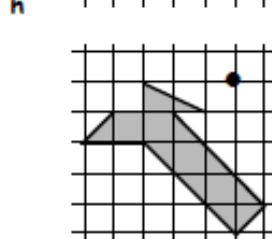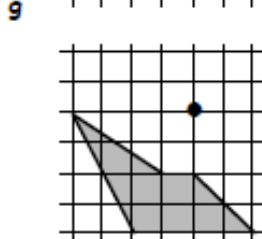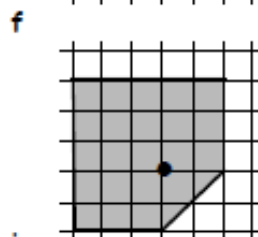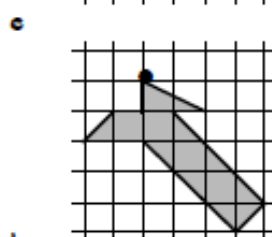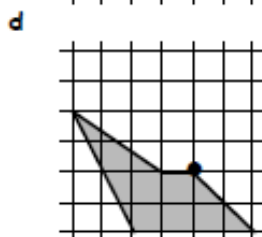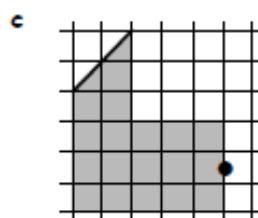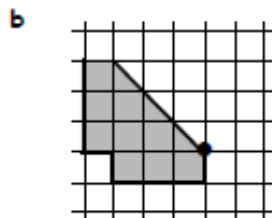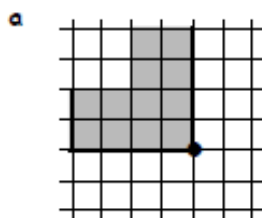
Symmetry

Translation (Slide) Symmetry

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

    a   b   c   d

    e   f   g   h
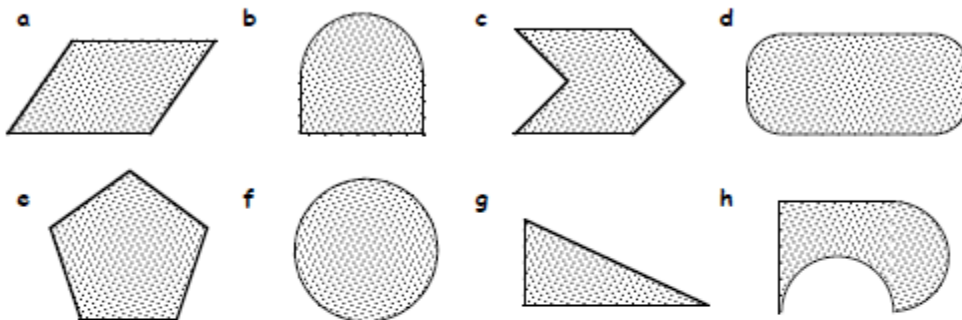
2. a   Draw each shape shown below and shade it in.

    b   Tile the plane using 6-8 congruent tiles

    (i)   (ii)   (iii)
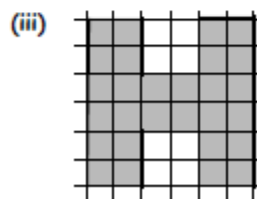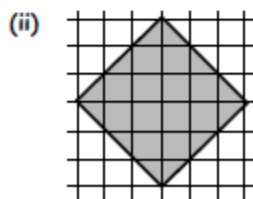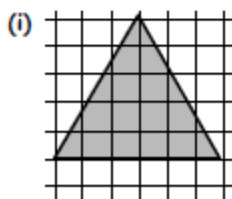
Answers

Ch 11 Ex 1   **Line Symmetry**

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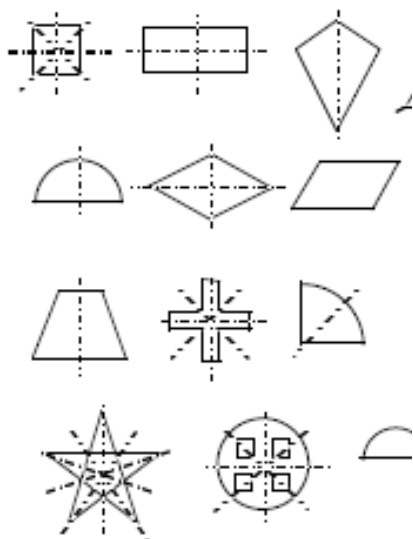
2.
a 4	b 2	c 1
d 3	e 1	f 2
g 0	h 6	i 1
j 4	k 1	l 1
m 5	n 4	o 0

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

4.
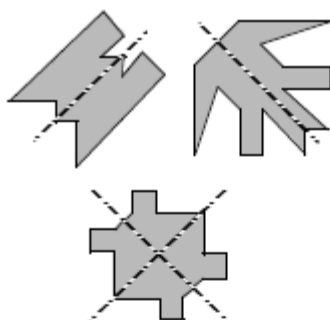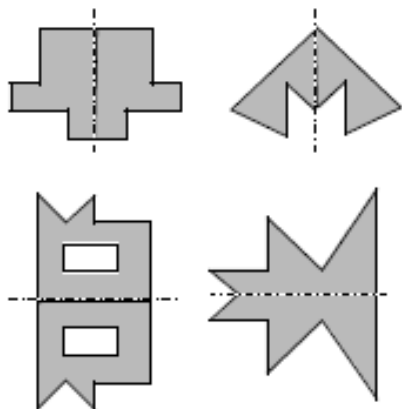
Ch 11 Ex 2   **Rotational Symmetry**

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
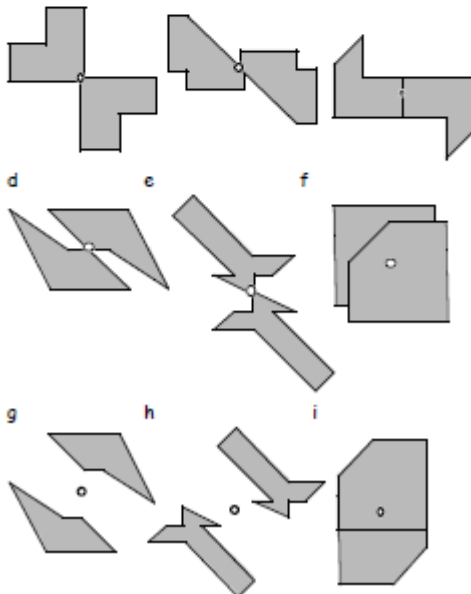
1. b d f
2. (i)
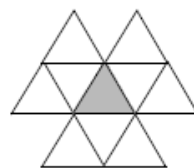
(ii)
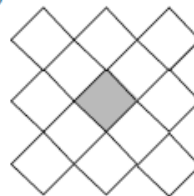
(iii)

Area/Perimeter

Perimeter & Area

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

a

5 cm

12 cm

b

square

5 cm

c

13 cm

5 cm

12 cm

d

20 m

50 m

e

20 cm

200 cm
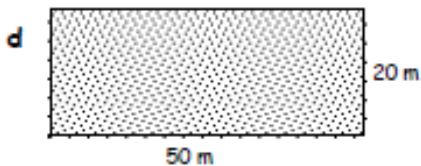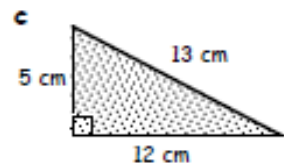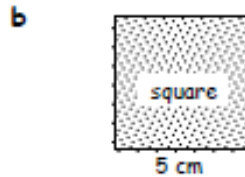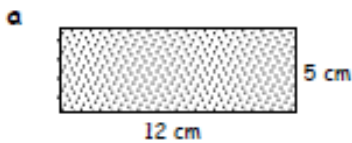
2.   Four strips of electrical wire fence surround a rectangular field with area 8000 square metres.

   a   Find the width of the field given that the length is 100 metres.

   b   What is the total length of wire needed ?

   c   The wire costs 18p per metre.

       How much will the wire cost in total ?

100 m
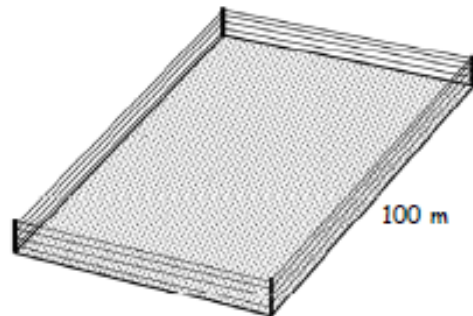
Answers

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

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 x B" and calculate the area, in cm²*).

   a

   20 cm

   9 cm

   b

   10 cm

   10 cm

   c

   40 cm

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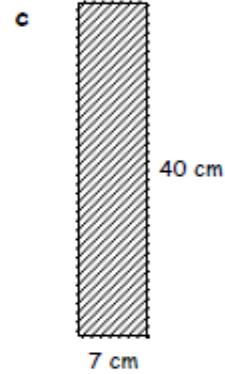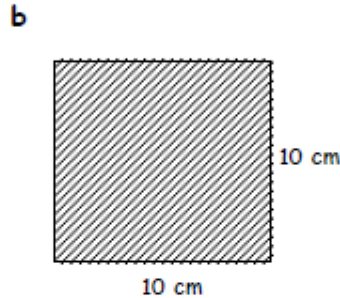
2. Calculate the area of carpet needed for each of these assembly halls :-

   a

   20 m

   24 m

   b

   17 m

   20 m

   c

   25 m

   35 m
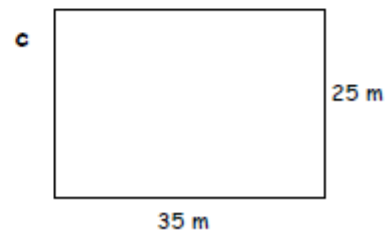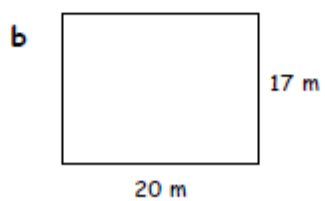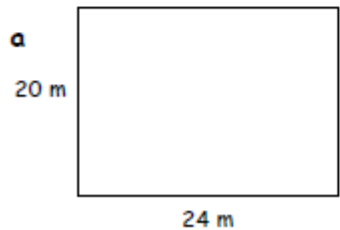
2. Use the formula Area = ½(L x B) each time to calculate the areas of the following triangles (make a neat sketch of each triangle) :-

   a

   6 cm

   12 cm

   b

   20 cm

   14 cm

   c

   13 cm

   16 cm

   d

   14 cm

   14 cm

   e

   7·5 cm

   8 cm

   f

   7 cm

   9 cm
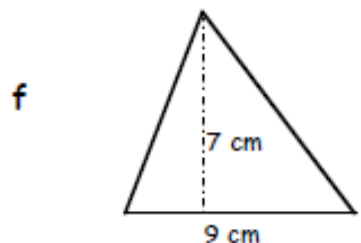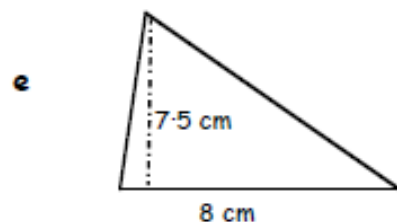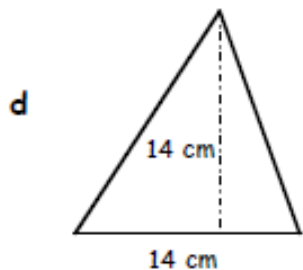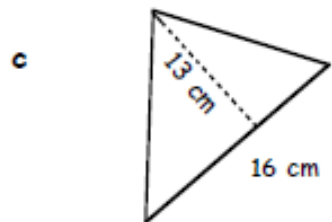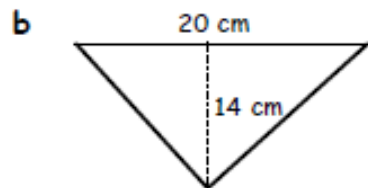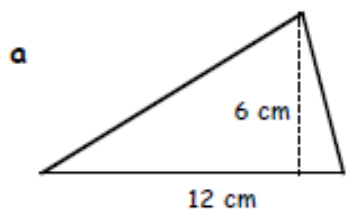
More Area/Perimeter

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
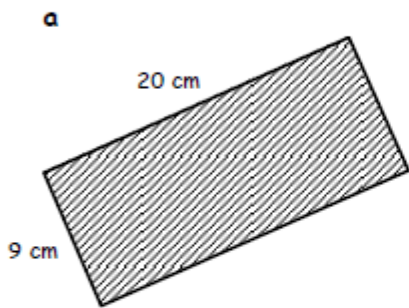
More Area/Perimeter

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.
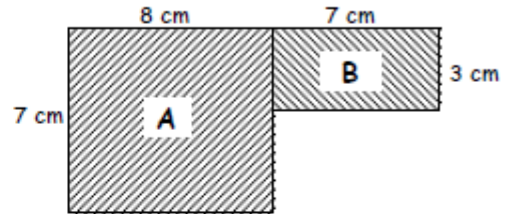
2. For each of these :–   (i)   Make a neat sketch.

                             (ii) Calculate the area of each part (show working).

                             (iii) Calculate the area of the whole shape.

a

b

c

2. **d**

    e
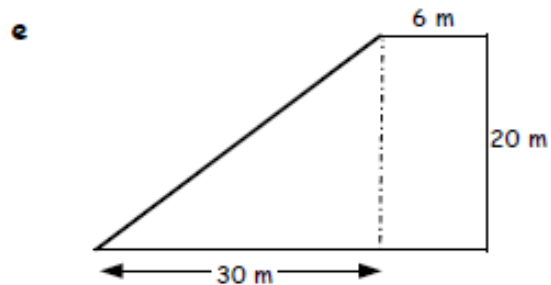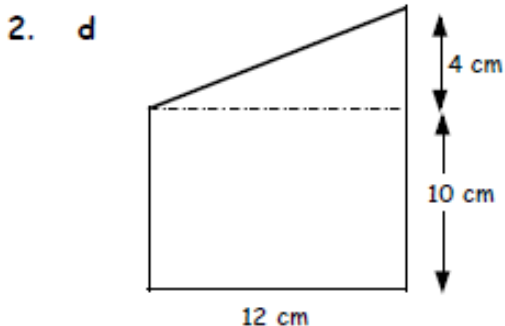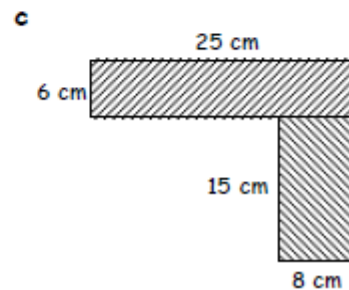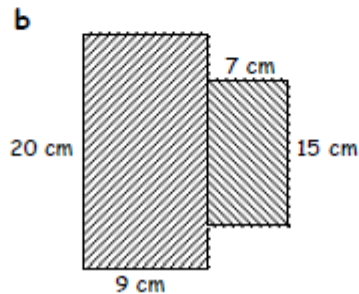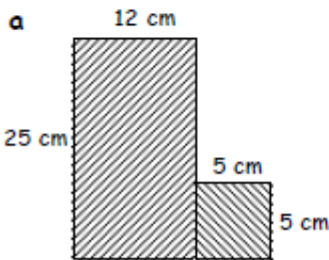
More Area/Perimeter

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

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