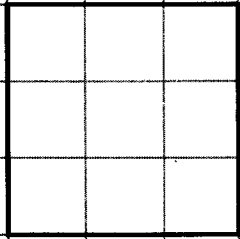


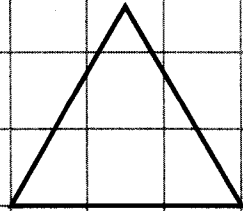
PROPERTIES OF POLYGONS

Page	Description
1	Name the polygon
2	Triangles. Measure angles and name
3	Quadrilaterals. Mark equal angles, equal sides and parallel lines
4	Quadrilaterals. Mark parallel sides, write in missing angles and side lengths
5	Quadrilaterals. Plot on a coordinate grid and name
6	Regular polygons. Interior and exterior angles
7	Regular polygons angle puzzle

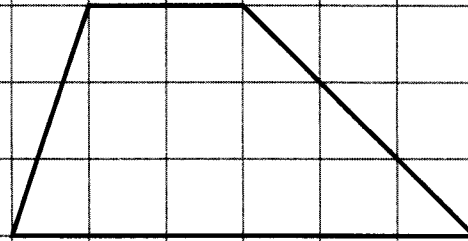
Name the shapes



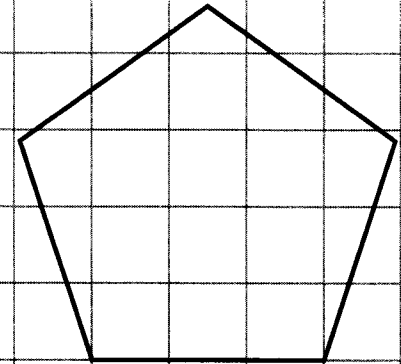
square



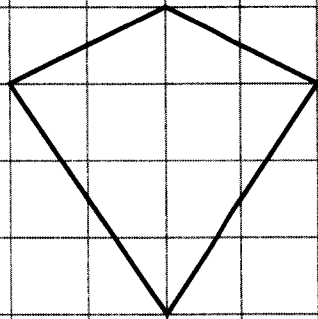
triangle, Equilateral



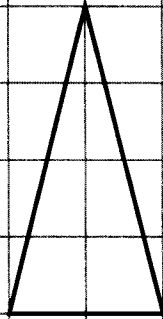
trapezium



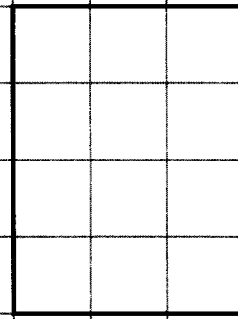
pentagon



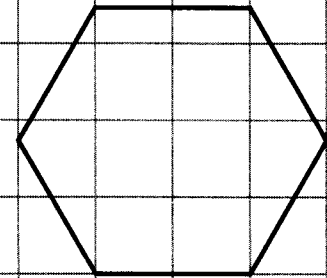
Kite



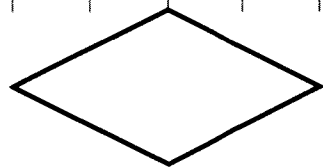
triangle, isosceles



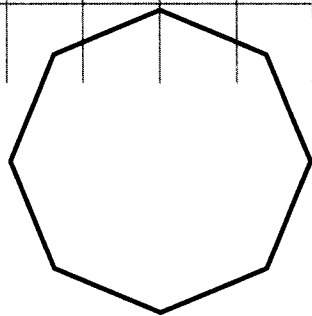
rectangle



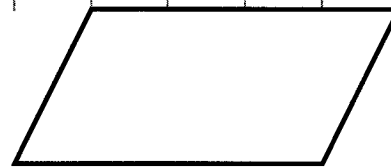
hexagon



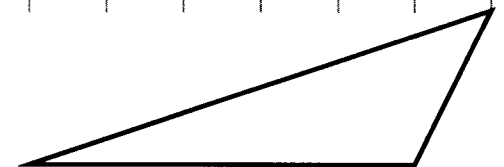
Rhombus



octagon



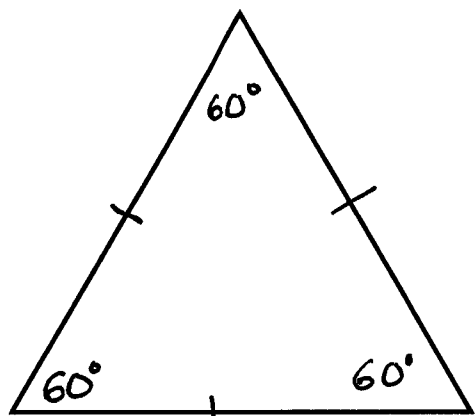
parallelogram



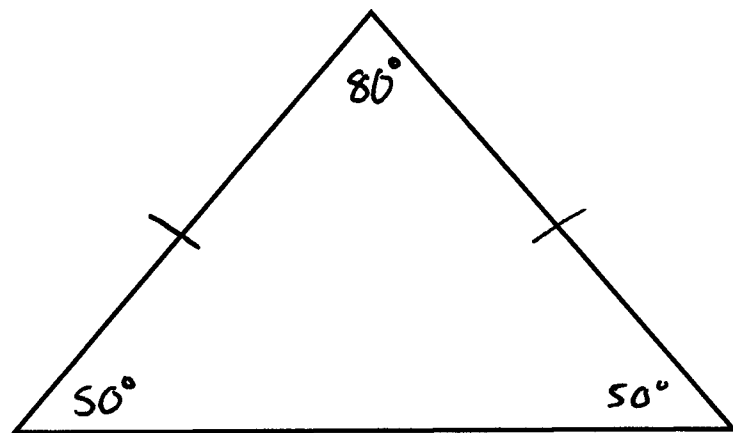
triangle, scalene.

①

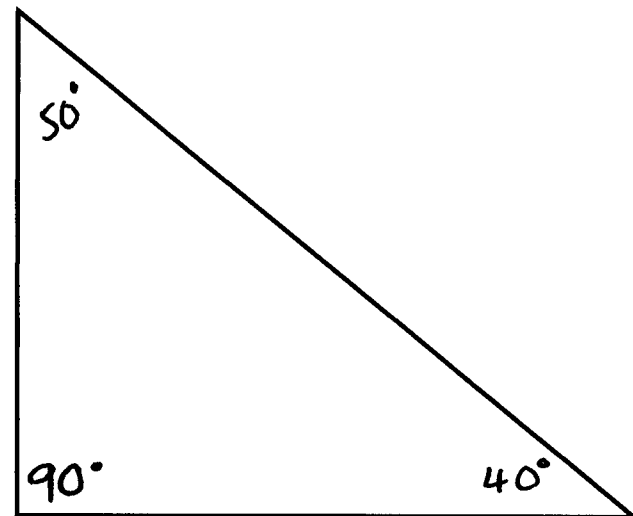
Measure the angles on each of these triangle, to the nearest 5. Name each triangle. Mark any sides that are the same



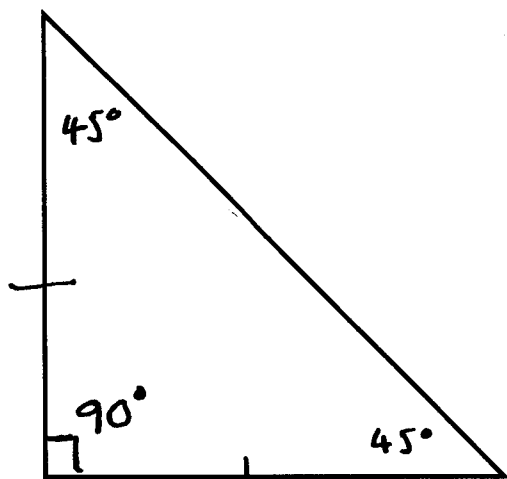
Triangle Equilateral



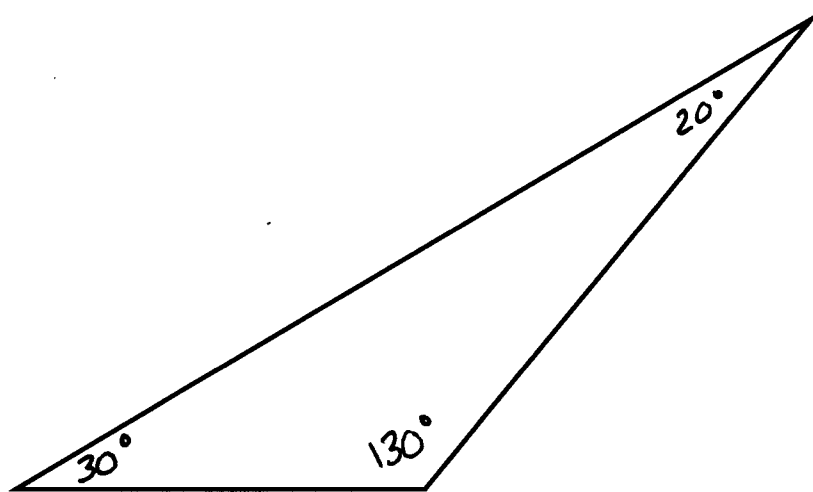
Isosceles



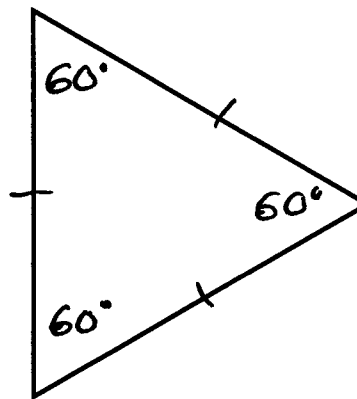
Right angled, scalene



Right angled
Isosceles

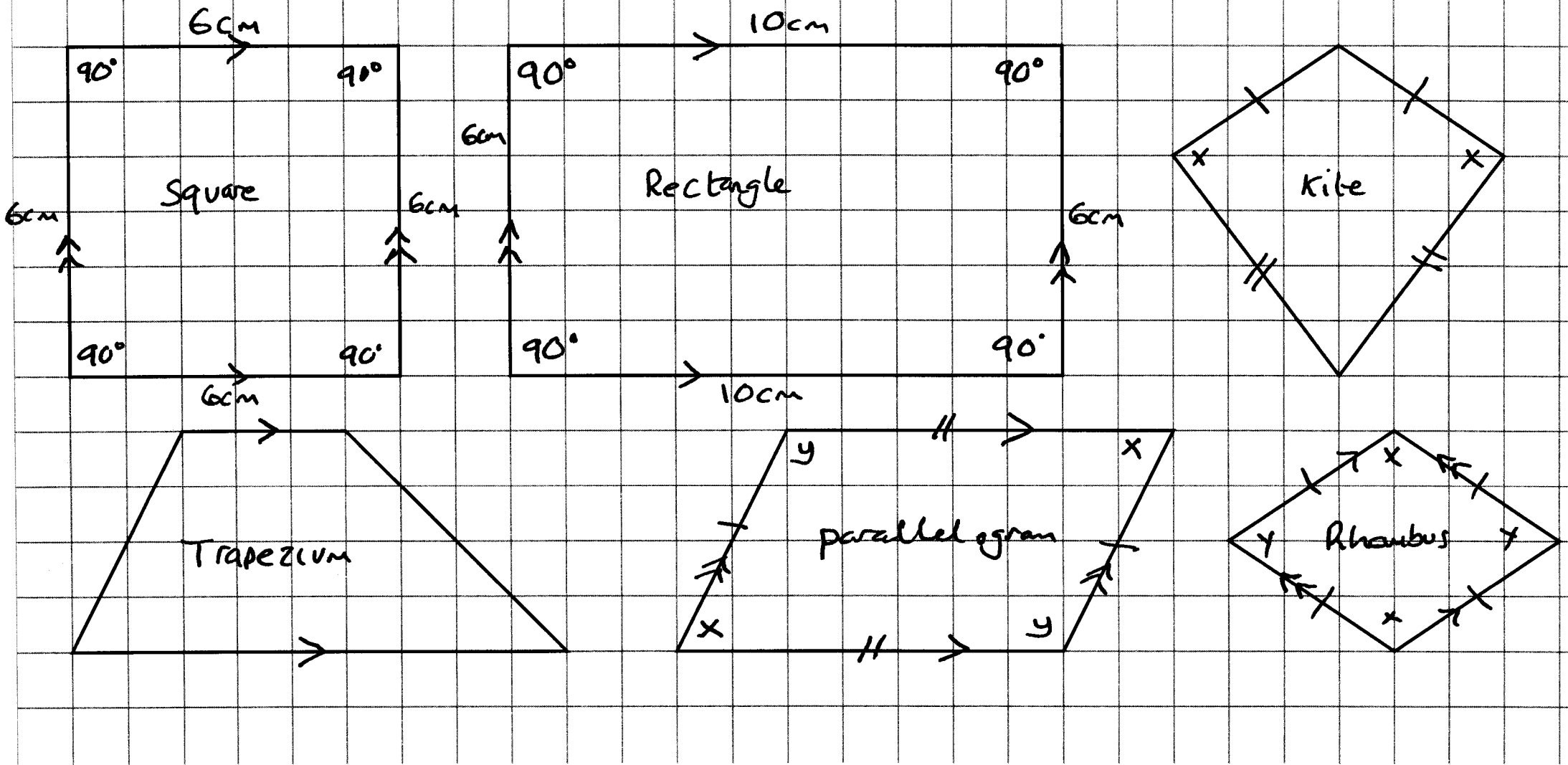


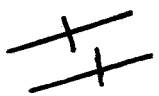

Scalene

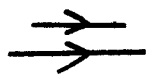



Equilateral.

Name each quadrilateral. Mark sides and angles that are equal. Mark parallel sides



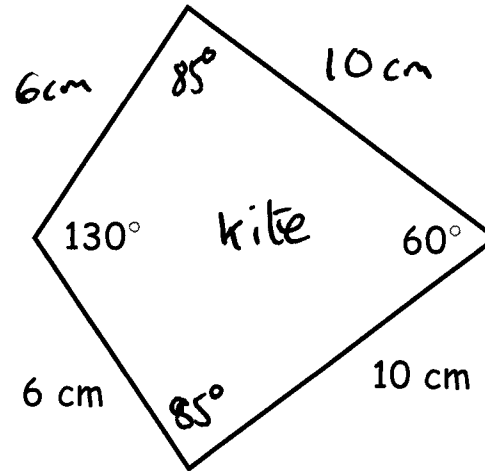
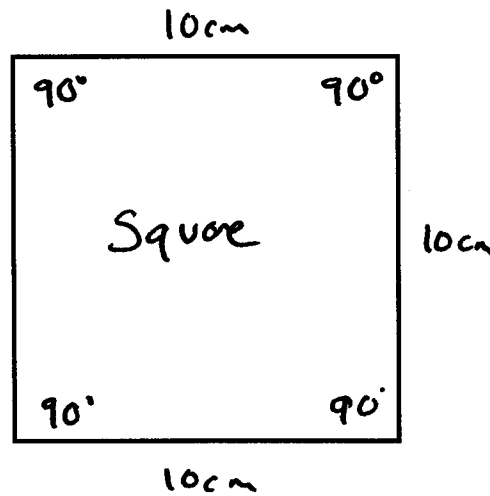
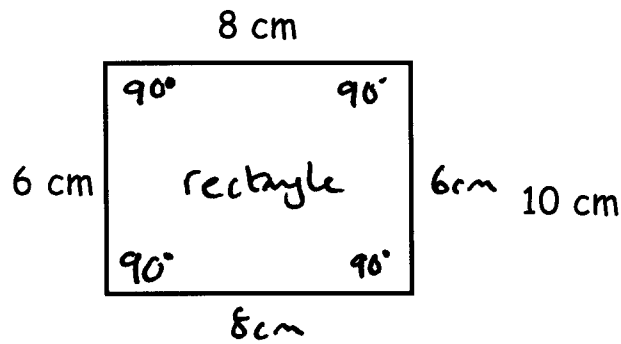
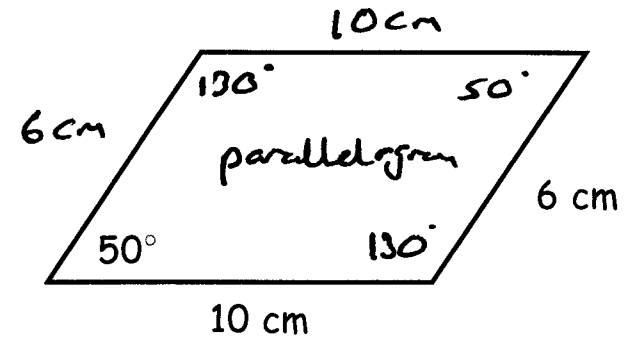
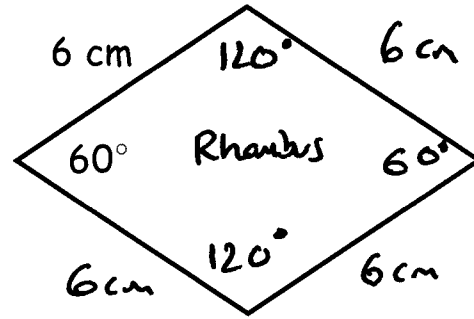
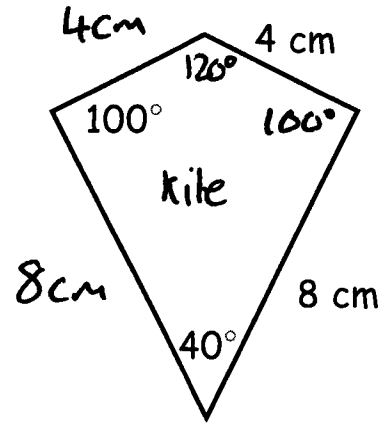
key  Equal length  Equal length

 parallel  parallel

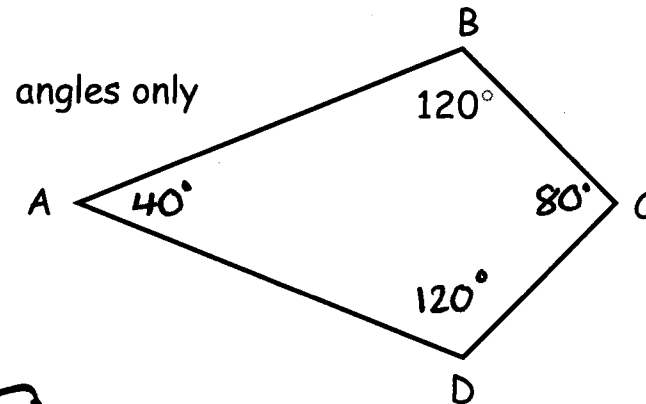
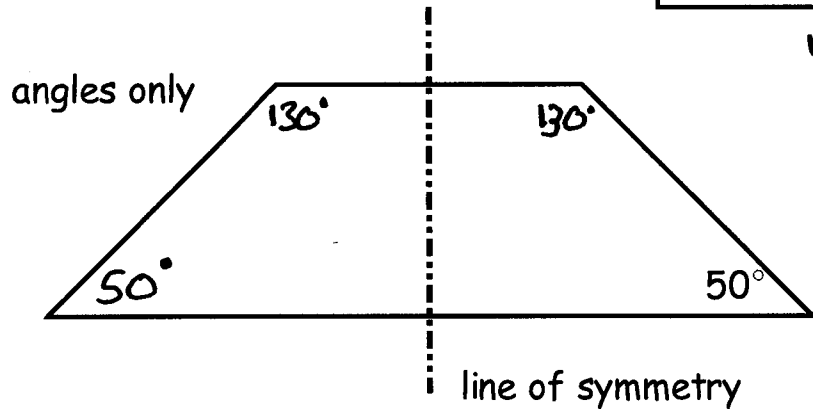
Equal angles x x
OR y y

③

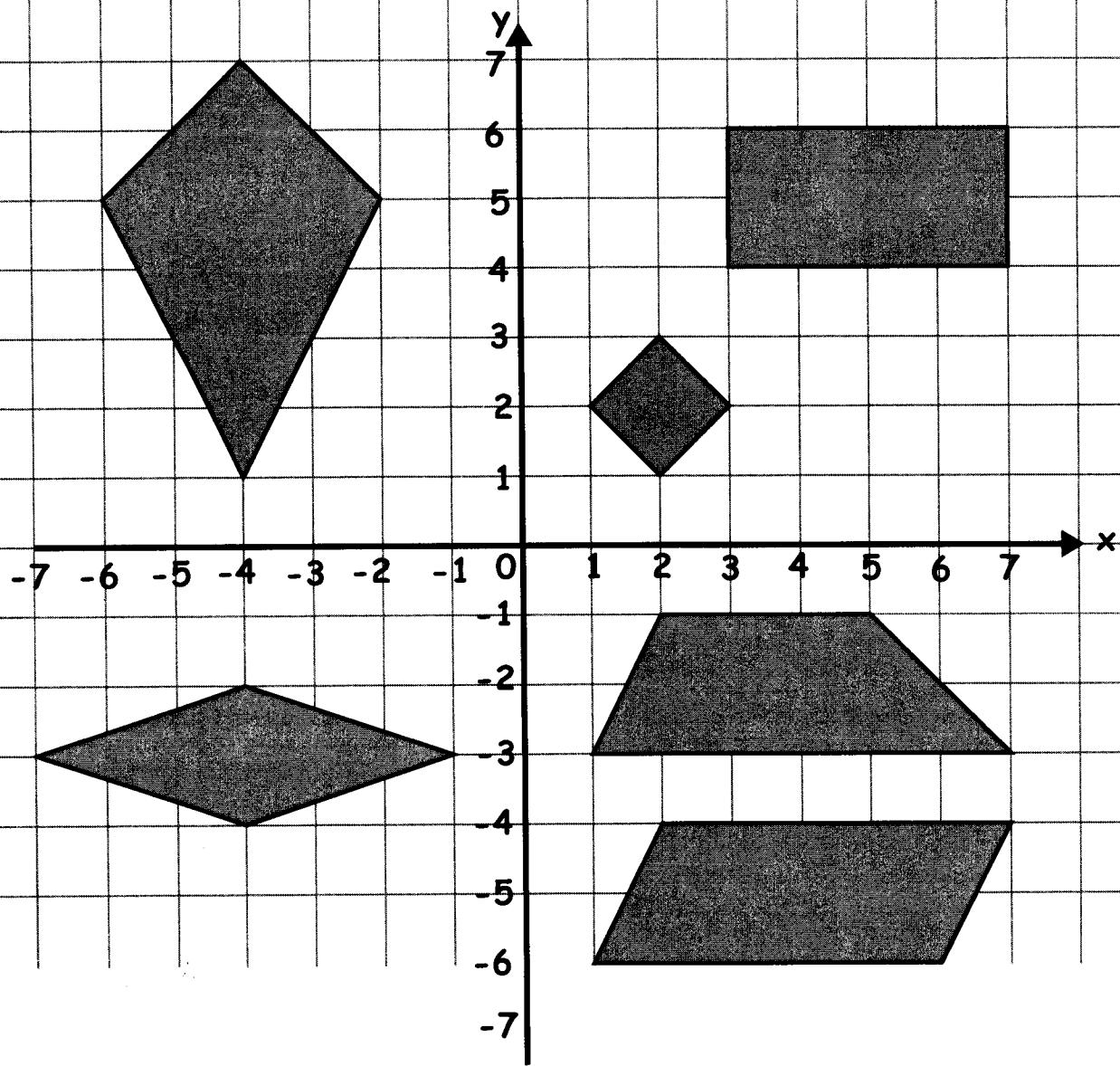
Name the quadrilateral. Mark any parallel sides. Write in the missing angles and sides. The drawings are not to scale



Angles
inside a
Quadrilateral
add to
make
 360°



Angle at C twice the
angle at A



Plot the points.
 Either locate the fourth point OR Name the quadrilateral.
 Draw each quadrilateral and label it.

1) (1,2), (2,3), (3,2)

Name SQUARE Missing coordinate 2,1

2) (3,4), (3,6), (7,6)

Name RECTANGLE Missing coordinate 7,4

3) (-4,1), (-6,5), (-4,7)

Name KITE Missing coordinate -2,5

4) (-7,-3), (-4,-2), (-1,-3), (-4,-4)

Name Rhombus

5) (2,-1), (5,-1), (7,-3), (1,-3)

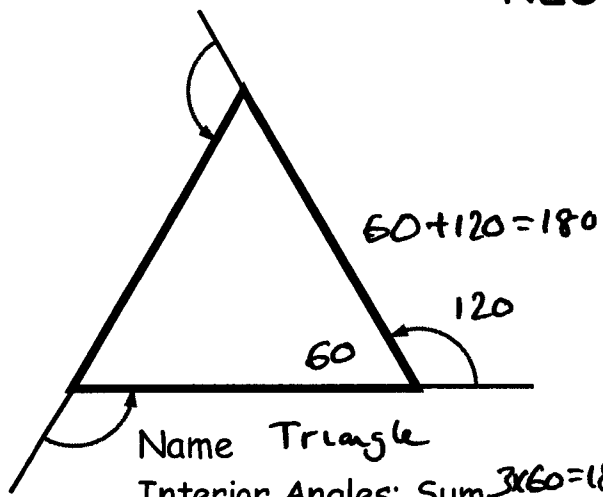
Name trapezium

6) (1,-6), (2,-4), (7,-4)

Name PARALLELOGRAM Missing coordinate 6,-6

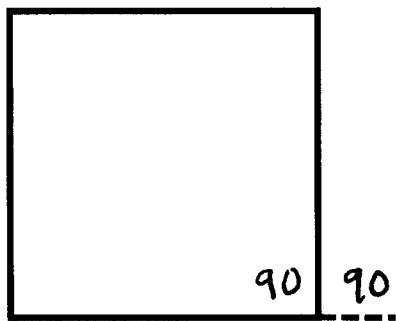
REGULAR POLYGONS

Sum of exterior angles is always 360
 Exterior + Interior = 180°



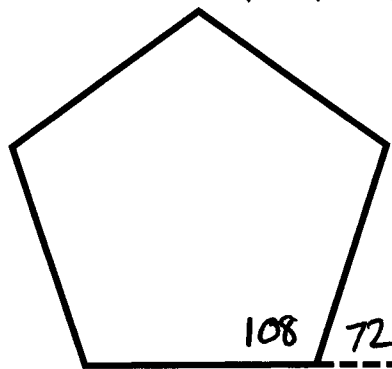
Name Triangle

Interior Angles: Sum $3 \times 60 = 180^\circ$
 One 60
 Exterior Angles: Sum 360
 One $360 \div 3 = 120$



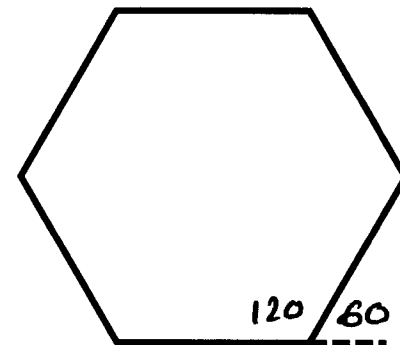
Name Quadrilateral

Interior Angles: Sum $4 \times 90 = 360$
 One 90
 Exterior Angles: Sum 360
 One $360 \div 4 = 90$



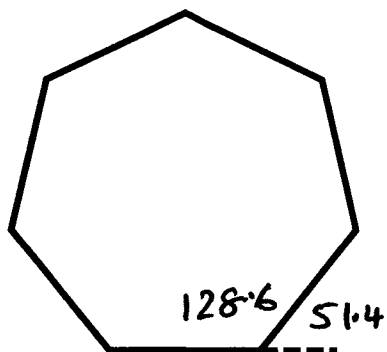
Name Pentagon

Interior Angles: Sum $5 \times 108 = 540$
 One 108
 Exterior Angles: Sum 360
 One $360 \div 5 = 72$



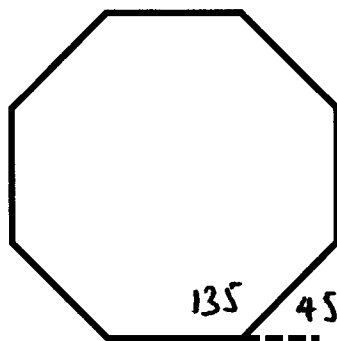
Name Hexagon

Interior Angles: Sum $6 \times 120 = 720$
 One 120
 Exterior Angles: Sum 360
 One $360 \div 6 = 60$



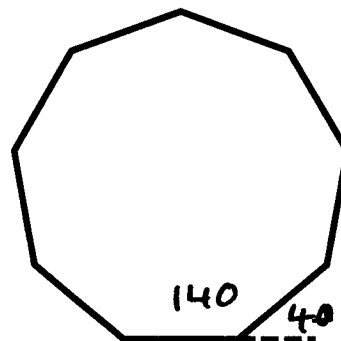
Name Heptagon or Septagon

Interior Angles: Sum $7 \times 128.6 = 900$
 One 128.6
 Exterior Angles: Sum 360
 One $360 \div 7 = 51.4$



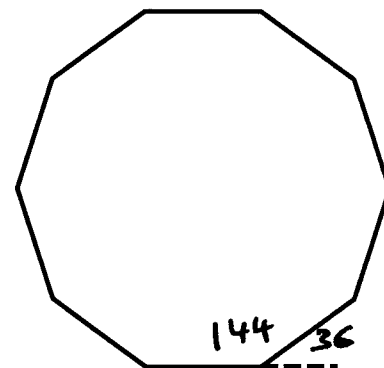
Name Octagon

Interior Angles: Sum $8 \times 135 = 1080$
 One 135
 Exterior Angles: Sum 360
 One $360 \div 8 = 45$



Name Nonagon

Interior Angles: Sum $9 \times 140 = 1260$
 One 140
 Exterior Angles: Sum 360
 One $360 \div 9 = 40$



Name Decagon

Interior Angles: Sum $10 \times 144 = 1440$
 One 144
 Exterior Angles: Sum 360
 One $360 \div 10 = 36$

6

Calculate the angles marked with a •
 All polygons are regular

