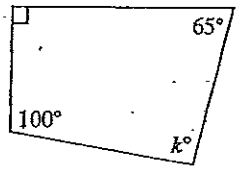
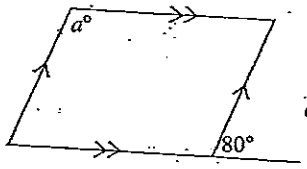
d



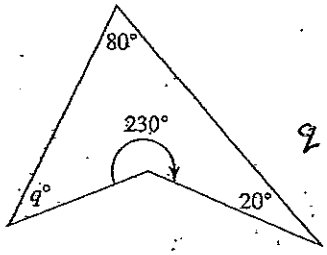
$k = 105$

e



$a = 100$

f



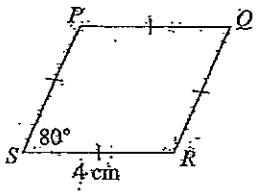
$q = 30$

25 (2 marks) Sketch a right-angled triangle ΔPQR. Label its angles P, Q and R and correctly label its sides p, q and r.

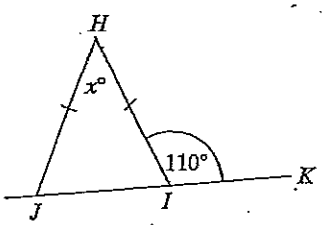
Tutor to check

26 (4 marks) Construct this rhombus $PQRS$.

Tutor to check

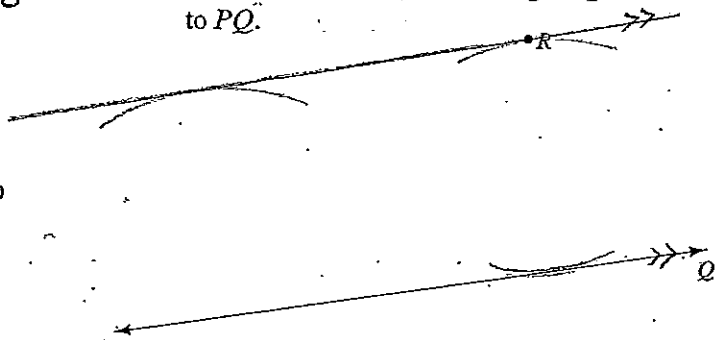


27 (2 marks) Find x, giving reasons.

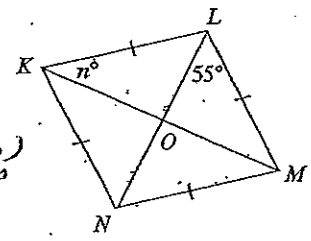


$x = 40$

28 (2 marks) Use a pair of compasses and a ruler to construct a line through R parallel to PQ.



29 (2 marks) Find n, giving reasons.



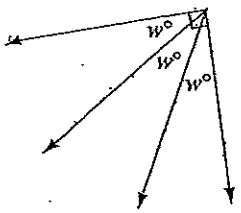
$\angle OLK = 55^\circ$ (Diagonals bisect it's vertex angles)

$n^\circ = 180^\circ - 55^\circ - 90^\circ$

$= 35^\circ$

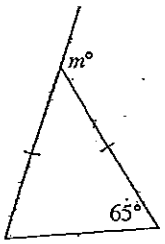
30 (12 marks) Find the value of each pronumeral.

a



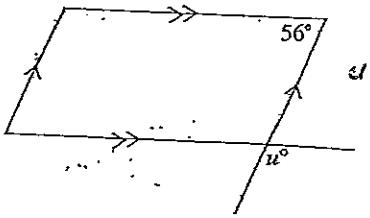
$w = 30$

b



$m = 130$

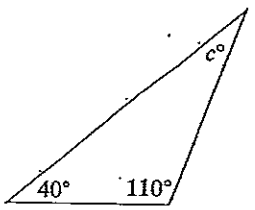
c



$u = 124$

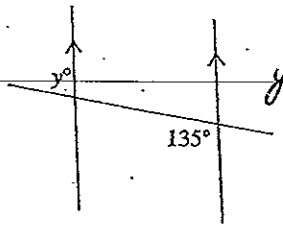
Topic test 3: Geometric figures *continued*

d



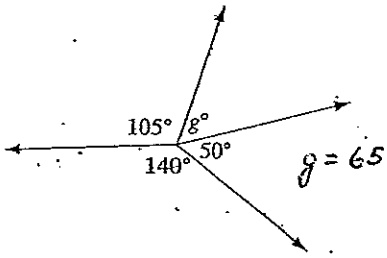
c = 30

e.



y = 45

f

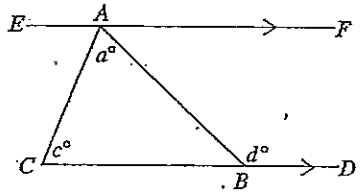


g = 65

31 (3 marks) Construct a triangle ΔABC where $a = 4$ cm, $\angle C = 110°$ and $\angle B = 20°$.

Tutor to check

33 (7 marks) In the diagram, $EF \parallel CD$.



a Which angle in ΔABC is equal to $\angle EAC$? Why?

$c°$ (Alternate $\angle$s $EF \parallel CD$)

b Hence write an expression for the size of $\angle EAB$.

$a° = d° - c°$ (Ext. $\angle$ of ΔABC)

c What types of angles are $\angle EAB$ and $\angle ABD$?

Alternate $\angle$s.

d Hence write an expression for the value of d.

$d° = a° + c°$

e What does this prove about the exterior angle of a triangle?

Ext. $\angle$ of Δ is equal to the sum of the interior opp. $\angle$s.

END OF TEST.

Use the rest of this column for extra working space.

32 (6 marks)

a Explain in your own words what a rectangle is.

- Opp. sides equal + parallel
- Diagonals bisect one another
- Each vertex angle is 90°

b Write one property about the sides of a rectangle. Opposite sides are equal

c Write one property about the diagonals of a rectangle.

Diagonals bisect each other.