F.2 Mathematics Worksheet 12
Ch.12 Polygons

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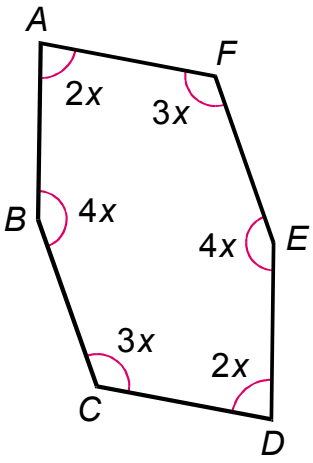
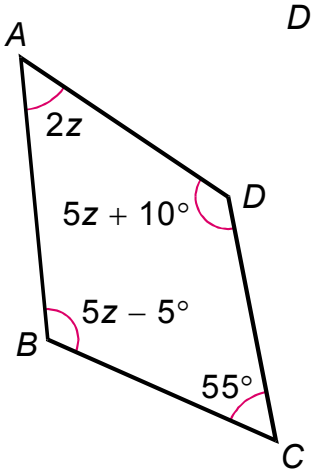
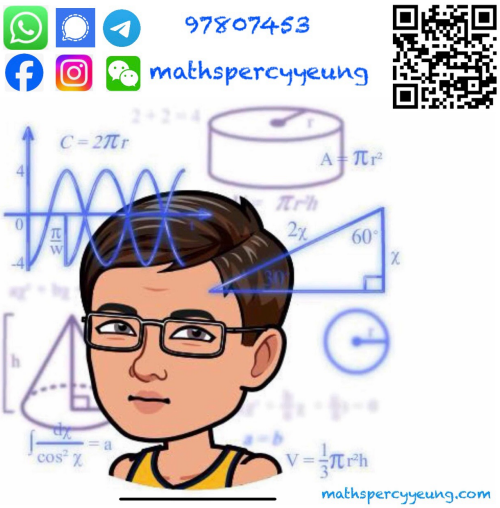
1. Find the unknown in each of the following figures.

(a)



(b)





2. If each of the following is the sum of interior angles of a polygon, find the number of sides of the polygon.

(a) 720°

(b) 1 800°

3. Find the size of an interior angle of each of the following regular polygons.

(a) Regular pentagon

(b) Regular 12-gon

4. If each of the following is the size of an interior angle of a regular polygon, find the number of sides of the regular polygon.

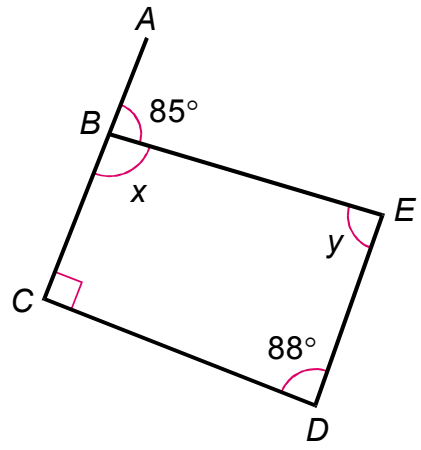
(a) 120°

(b) 165°

5. In the figure, ABC is a straight line.

(a) Find x.

(b) Find y.

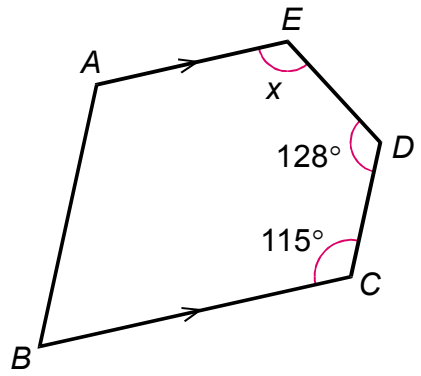


6. If the interior angles of a pentagon are in the ratio of 2 : 3 : 4 : 5 : 6, find the size of the smallest interior angle.

7. In the figure, $AE \,//\, BC$.

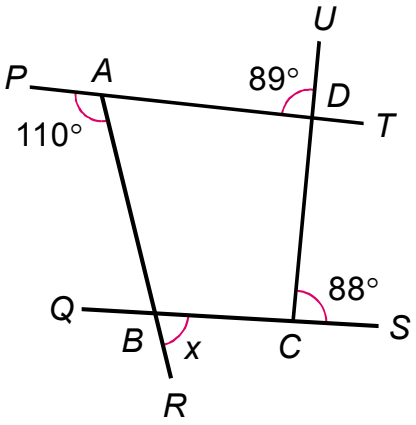
(a) Prove that $\angle EAB + \angle ABC = 180°$.

(b) Hence, find x.



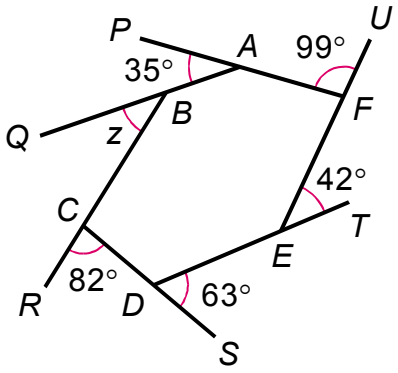
8. Find the unknown in each of the following figures.

(a)



PADT, *ABR*, *QBCS* and *UDC* are straight lines.

(b)



PAF, *QBA*, *RCB*, *CDS*, *DET* and *UFE* are straight lines.

9. Find the size of an exterior angle of each of the following polygons.

(a) Regular octagon

(b) Regular 20-gon

10. If each of the following is the size of an exterior angle of a regular polygon, find the number of sides of the regular polygon.

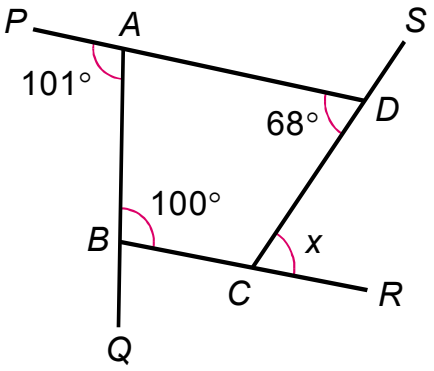
(a) 120°

(b) 14.4°

11. If the exterior angles of a pentagon are in the ratio of 2 : 2 : 3 : 3 : 5, find the size of the largest exterior angle.

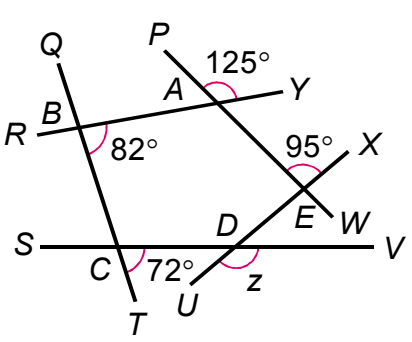
12. Find the unknown in each of the following figures.

(a)



PAD, *ABQ*, *BCR* and *CDS* are straight lines.

(b)



PAEW, *RBAY*, *QBCT*, *SCDV* and *UDEX* are straight lines.

13. If each interior angle of a regular polygon is 132° more than its exterior angle, find the number of sides of the regular polygon.