Angles

- Identifying alternate and corresponding angles
- Proving that the angles of a triangle add up to 180° and that the angles of any quadrilateral add up to 360°
- Knowing that the exterior angle of a triangle is equal to the sum of the two interior opposite angles
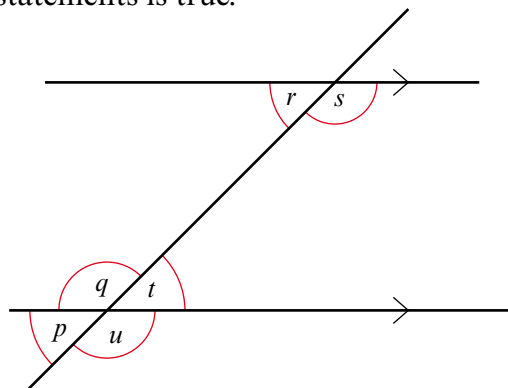
Keywords

You should know
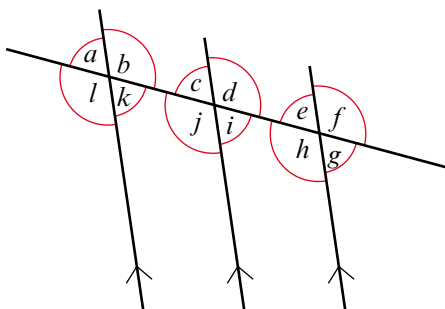
explanation 1a   explanation 1b   explanation 1c

1 a Look at this diagram.

Give a reason why each of these statements is true.

    i angle p = angle r

    ii angle p = angle t

   iii angle r = angle t

    iv angle q = angle s

    v angle q = angle u

   vi angle s = angle u

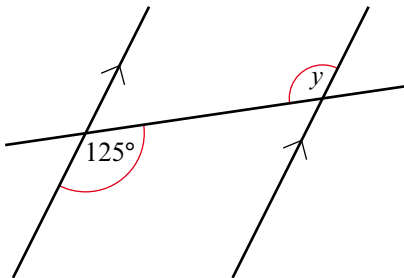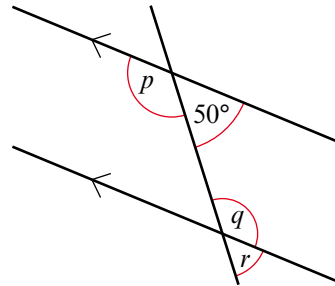**b** Look at this diagram.

List all the pairs of

    i alternate angles

   ii vertically opposite angles

   iii corresponding angles

2 Calculate the size of each angle marked by a letter.
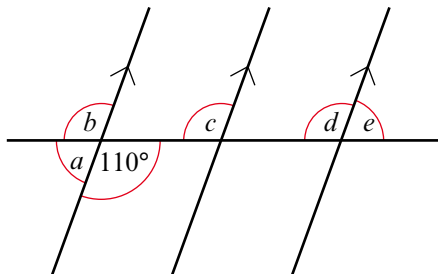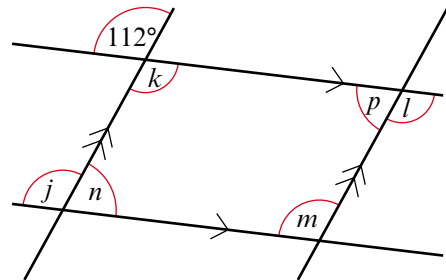Give reasons for your answers.

a

b

c

d
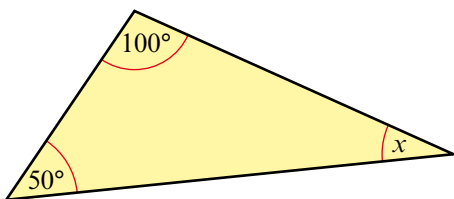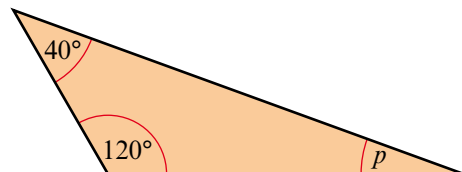

explanation 2a   explanation 2b

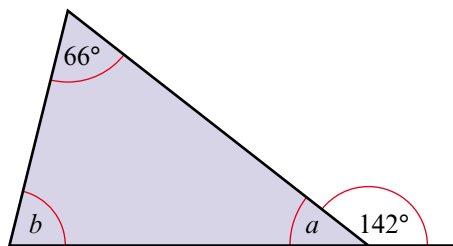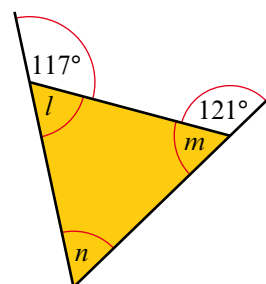**3** Calculate the size of each angle marked by a letter. Give reasons for your answers.

a

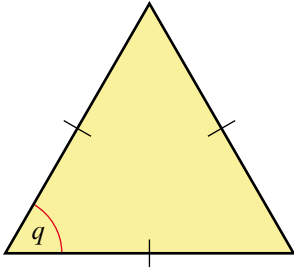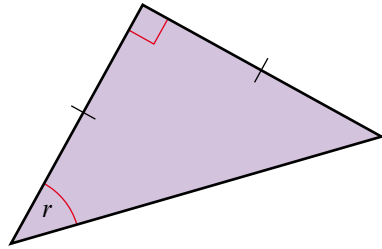**b**

c

d

4 Calculate the size of each angle marked by a letter.
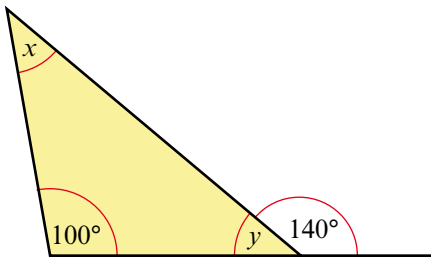Give reasons for your answers.

a

b

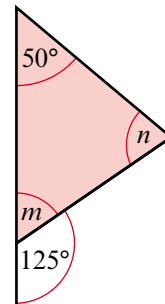explanation 3a   explanation 3b

5 Calculate the size of each angle marked by a letter.
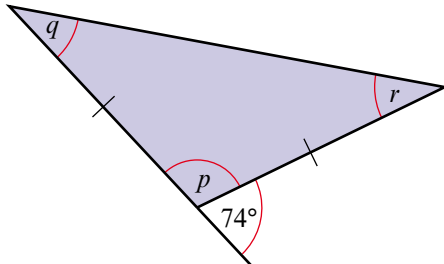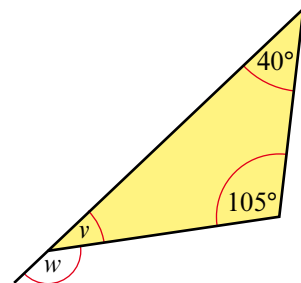Give reasons for your answers.

a

x

100°   y   140°

b

50°

n

m

125°

c

q

r

p

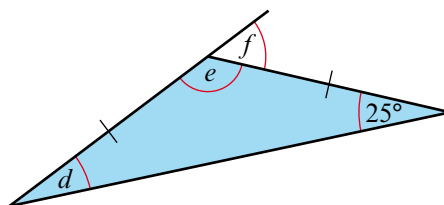74°

d

40°

105°

v

w

e

f

e

25°

d

f

y   x

v

31°

w

explanation 4

6 Calculate the size of each angle marked by a letter.
Give reasons for your answers.

a
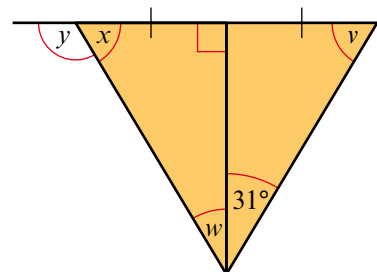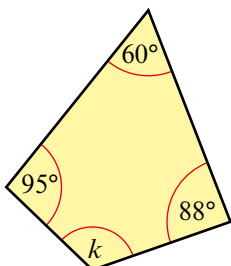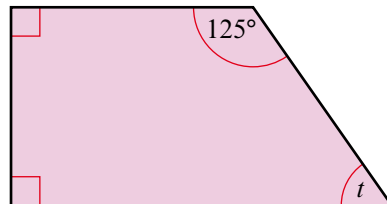

60°

95°

88°

k

b

125°

t

c

s

84°

r   45°

d

62°

z

e

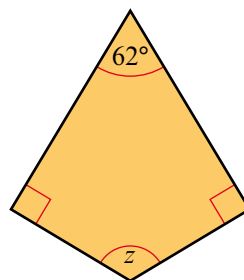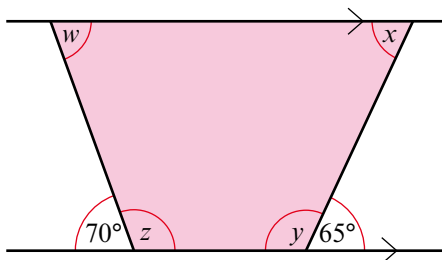

w

x

70° z

y 65°

f

c d

b

e

a 53°

7 Calculate the size of each angle marked by a letter.
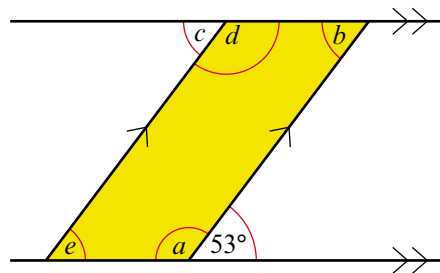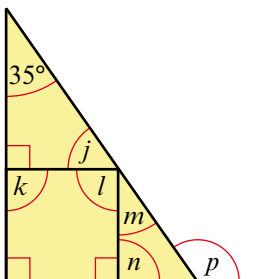Give reasons for your answers.

a

35°

j

k   l

m

n   p

b

f

d

e

35°