

## Solutions

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Award method and answer marks as indicated; accept equivalent correct methods.

### 2.1

- $a = 180 - 124 = \mathbf{56^\circ}$ ; angles on a straight line.

### 2.2

- $x = 360 - 95 - 140 = \mathbf{125^\circ}$ ; angles at a point.

### 2.3

- $y = 180 - 68 = \mathbf{112^\circ}$ ; co-interior angles on parallel lines sum to 180 degrees.

### 2.4

- $e = 360/10 = 36^\circ$ ;  $i = 180 - e = \mathbf{144^\circ}$ .

### 3.1

(a)

- $n = 360/e = 360/45 = \mathbf{8}$ .

(b)

- $i = 180 - 45 = \mathbf{135^\circ}$ .

(c)

- $S = (8 - 2)180 = \mathbf{1080^\circ}$ ; check  $8(135) = 1080$ .

### 3.2

(a)

- Base angles are equal, so  $\beta = (180 - 44)/2 = \mathbf{68^\circ}$  at B and C.
- The exterior angle is  $e = 180 - 68 = \mathbf{112^\circ}$ , using a straight-line sum.

(b)

- The alternate angle is  $\mathbf{68^\circ}$ , because alternate angles are equal for parallel lines.
- Co-interior angles sum to  $180^\circ$ , giving  $c = 180 - 68 = \mathbf{112^\circ}$ .