Circles / polygons / angles / parallel lines P1 Answers

1)

(a)	52	**2**	**M1** for 180 – 128 or 128 or 52 marked on diagram in a correct position.
(b)	22	**1**	

2)

(a) $x + 2x + 2x + 75 = 360$	**1**	Allow $4x + x + 75 = 360$ or $5x + 75 = 360$ or $5x = 285$
(b) (x =) 57 cao	**2**	**M1** correct first step after $5x + 75 = 360$ ie $5x = 360 - 75$ or $x + 15 = 72$ If zero **SC1** for correct solution to their linear equation seen in part **(a)** or in part **(b)** if **(a)** is blank

3)

(a) 360 ÷ 8 (= 45) Then 180 – their 45 (= 135)	1 1dep	Alt method 180 × (8 – 2) Then their 1080 ÷ 8 (= 135)
(b) **(i)** 45	1	
(ii) 90	1	

4)

(a)	129	**1**
(b)	Obtuse	**1**

5)

(a) (x =) 20	**1**	
(b) (y =) 65	**2**	**B1** for $ABD = 65°$ or $ADB = 95°$

6)

(a) **(i)** 70	**1**
(ii) 64	**1**
(b) Kite	**1**

7)

105	**2**	**M1** for 180 – 55 – 50 or **B1** for 55 or 75 seen in the correct angle inside the triangle

8)

(a) 30	**1**	
(b) **(i)** 12	**2ft**	**M1** for 360 ÷ their **(a)** (Any answer for **(a)** for method) Only ft for **A1** if 360 ÷ their **(a)** is an integer Other methods allowed if complete
(ii) 150 cao	**1**	

9)

(a)	51°	**1**
(b)	90°	**1**
(c)	66°	**1**

10)

(a)	[x =] 32	**2**	**M1** for angle OCD = 90° soi (or angle OCB = 90°)
(b)	[y =] 58	**2ft**	**M1** for angle AEC = 90° soi Follow through 90 – their (a)

11)

(a)	Exterior angle method [Ext angle =] 360 ÷ 5 5 × (180 – 72) = 540	**M1** **E1dep**	
(b)	[x =] 104 [y =] 135	**3ft**	B1 [x =] 104 M1 for 540 – (90 + 76 + their x)

12) 95 — **2** — **B1** for 85 seen or
M1 x = 180 – 'their angle ADC', if it is clearly seen

13)

(a)	isosceles	**1**	
(b)	64	**1**	
(c)	alternate (angle)	**1**	accept z angle

14) 18 — 3 — **M1** for exterior angle 180 – 160 implied by 20 (could be on diagram)
M1 dep for 360 ÷ their 20