

Grade 8 Nov Paper 2 2017 MEMO

QUESTION 1

[31]

- 1.1. C ✓ (1)
- 1.2. B ✓ (1)
- 1.3. A ✓ (1)
- 1.4. C ✓ (1)
- 1.5. B ✓ (1)

1.2.1.  $x = 71^\circ$  ✓ ... (vertically opposite) ✓ (2)

1.2.2.  $x = 360^\circ - (75^\circ + 130^\circ)$  ✓ ... (L's around a point) ✓  
 $= 155^\circ$  ✓ (2)

1.2.3.  $x = 63^\circ$  ✓ (corresponding L's  $IJ \parallel KL$ ) ✓ (2)

1.2.4.  $180^\circ - 76^\circ = 104^\circ$  (L's in  $\Delta$ ) ✓  
 $104 \div 2 = 52^\circ$   
 $\therefore x = 180^\circ - 52^\circ$  (L's on straight-line) ✓  
 $= 128^\circ$  ✓ (3)

1.2.5.  $5x + 4x = 180^\circ$  ✓ (cointerior L's  $RS \parallel TV$ ) ✓  
 $9x = 180^\circ$   
 $x = 20^\circ$  ✓ (3)

1.3.1.  $\hat{CAD} = 180^\circ - (70^\circ + 42^\circ)$  (L's in  $\Delta$ ) ✓  
 $\hat{CAD} = 68^\circ$  ✓ (2)

1.3.2.  $\hat{CBD} = 180^\circ - 70^\circ$  (cointerior L's  $BG \parallel CD$ ) ✓  
 $\hat{CBD} = 110^\circ$  ✓ (2)

1.3.3.  $\hat{FDE} = 45^\circ$  ✓ (alt L's  $BF \parallel CD$ ) ✓ (2)

1.3.4.  $\hat{AGF} = 180^\circ - 42^\circ$  (alt L's  $BF \parallel CD$ ) ✓  
 $\therefore \hat{AGF} = 138^\circ$  ✓ (straight-line) ✓ (3)

1.3.5.  $\hat{GDF} = 180^\circ - (42^\circ + 45^\circ)$  (straight-line) ✓  
 $= 93^\circ$  ✓ (2)

1.4.  $x + 10^\circ + 3x + 10^\circ + 2x + 10^\circ$  (L's in  $\Delta$ ) ✓  
 $= 180^\circ$  ✓  
 $\therefore 6x = 150^\circ$

$\therefore x = 25^\circ$  ✓ (3)

QUESTION 2 [16]

2.1.1.  $AB^2 = 13^2 - 12^2$  (Pythagoras) ✓  
 $AB^2 = 169 - 144$   
 $\therefore AB = 5 \text{ cm}$  ✓ (2)

2.1.2.  $13 + 5 + 12 + 12 + 12$   
 $= 66 \text{ cm}$  ✓ (1)

2.1.3. Area of  $\Delta = \frac{1}{2} b \times h$   
 $= \frac{1}{2} (5)(12)$   
 $= 30 \text{ cm}^2$  ✓

Area of rectangle:  $l \times b$   
 $= 18 \times 12$   
 $= 216 \text{ cm}^2$  ✓

$\therefore$  Area of ABCDE =  $30 + 216$  ✓  
 $= 246 \text{ cm}^2$  ✓ (4)

2.2.1.  $2\pi r$  or  $\pi \times d$  ✓  
 $\therefore 22\pi$  ✓ (2)

2.2.2. Area of square - Area of circle ✓  
 $22 \times 22 - \pi (11)^2$  ✓  
 $484 \text{ cm}^2 - 121\pi \text{ cm}^2$  ✓  
 $\therefore$  shaded region =  $484 - 121\pi \text{ cm}^2$  ✓  
 (4)

2.3  
 TSA of  $\Delta$ :  $b \times h + L \times \text{side} + L \times b + L \times h$  ✓  
 $8 \times 6 + 3 \times 10 + 3 \times 8 + 3 \times 6$  ✓  
 $= 48 + 30 + 24 + 18$  ✓  
 $= 120 \text{ cm}^2$  ✓ (3)

QUESTION 3 [5]

- 3.1.  $20^\circ \text{C}$  ✓ (1)  
 3.2. Thursday ✓ (1)  
 3.3. Wednesday ✓ (1)  
 3.4.  $40 - 12$  ✓ OR  $40 - 13$  ✓  
 $= 28^\circ \text{C}$  ✓  $= 27^\circ \text{C}$  ✓  
 (2)

QUESTION 4 [9]

- 4.1. 12 ✓ (1)  
 4.2.  $18 - 10$  ✓ = 8 ✓ (2)  
 4.3.  $12 + 10 + 12 + 15 + 11 + 12 + 13 + 13 + 18$   
 $+ 11 + 17 + 12 = 156$  ✓  
 $\frac{156}{12}$  ✓ = 13 years ✓  
 (3)

4.4. 10; 11; 11; 12; 12; 12; 12; 13; 13; 15;  
 17; 18 ✓ (put in order)

$\frac{12 + 2}{2} \checkmark = 12 \checkmark$  (3)

QUESTION 5 [9]

5.1. B (5; 3) ✓ (1)

C (8; 3) ✓ (1)

5.2. A' (1; 3) (2)

- 5.3. Translation, ✓  
 1 unit to the right and  
 5 units down ✓ (3)

5.4. C' (0; 0) (2)