

UNIT PEPERIKSAAN  
KOLEJ YAYASAN SAAD, MELAKA

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FORMATIVE TEST 2  
MATHEMATICS (FORM 3)  
April, 2012

50/1,2

1 hour

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JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

INFORMATION FOR CANDIDATES

1. This question paper consists of 20 objective questions and 5 subjective questions.
2. Answer all the questions.
3. You may use a non-programmable scientific calculator for the objective questions only.
4. Answer the subjective questions clearly in the spaces provided for in the question paper. Show your working. It may help you to get marks.
5. Answer each objective question by blackening the correct space on the answer sheet provided.

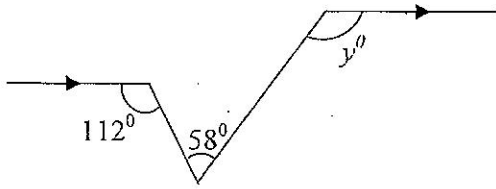
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Kertas soalan ini mengandungi 7 halaman bercetak

[Lihat halaman sebelah  
SULIT

Objective Questions

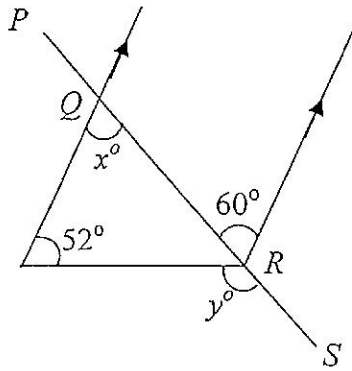
1



The value of  $y^\circ =$

- A  $122^\circ$
- B  $128^\circ$
- C  $126^\circ$
- D  $132^\circ$

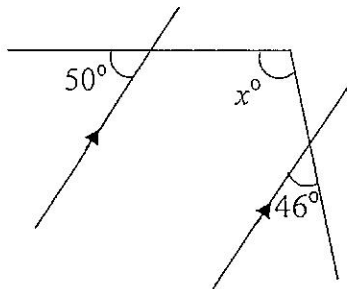
2



In the diagram above,  $PQRS$  is a straight line.  
The value of  $x + y =$

- A  $172^\circ$
- B  $112^\circ$
- C  $150^\circ$
- D  $68^\circ$

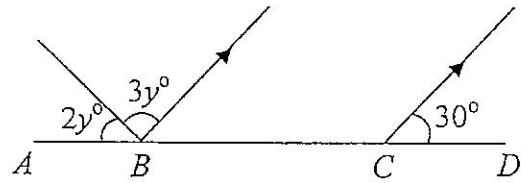
3



In the diagram above, the value of  $x^\circ$  is

- A  $42^\circ$
- B  $96^\circ$
- C  $50^\circ$
- D  $130^\circ$

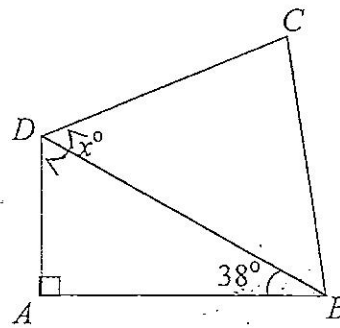
4



The value of  $y^\circ =$

- A  $30^\circ$
- B  $40^\circ$
- C  $50^\circ$
- D  $60^\circ$

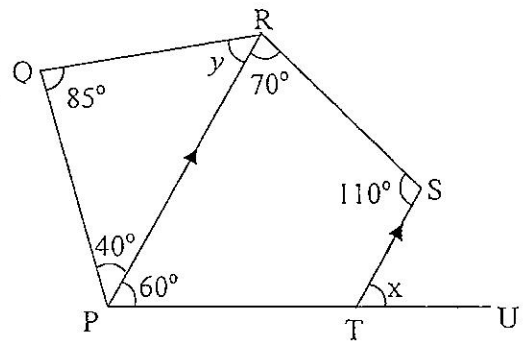
5



In the diagram,  $BCD$  is an equilateral triangle.  
Find the value of  $x$ .

- A  $62^\circ$
- B  $112^\circ$
- C  $98^\circ$
- D  $60^\circ$

6



In the diagram,  $PQRST$  is a polygon and  $PTU$  is straight line. The value of  $x + y$  is

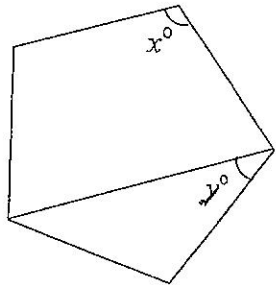
- A  $115^\circ$
- B  $60^\circ$
- C  $50^\circ$
- D  $120^\circ$

- 7 Six of the interior angles of a plane 7-sided polygon are each equal to  $x^\circ$  while the remaining interior angle is  $(x + 18)^\circ$ . Calculate  $x$ .

- A  $117^\circ$                       C  $130^\circ$   
 B  $126^\circ$                       D  $154^\circ$

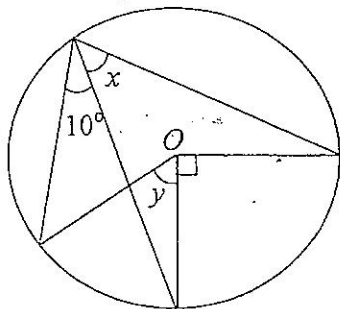
- 8 The diagram is a regular pentagon. Find the value of  $x + y$ .

- A  $162^\circ$   
 B  $108^\circ$   
 C  $144^\circ$   
 D  $72^\circ$

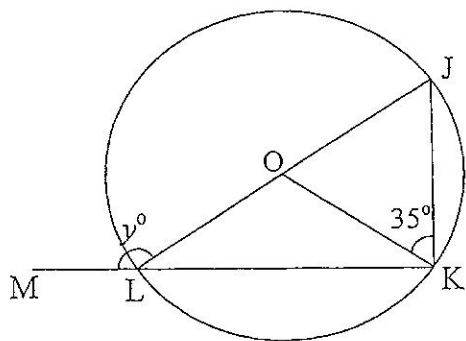


- 9 The diagram below shows a circle with centre at  $O$ . Find the value of  $x + y$ .

- A  $20^\circ$   
 B  $45^\circ$   
 C  $65^\circ$   
 D  $50^\circ$



10

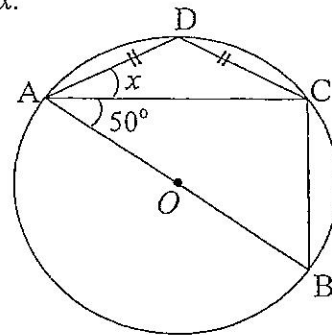


In the diagram,  $JOL$  and  $KLM$  are straight lines.  $O$  is the centre of the circle. Find the value of  $y$ .

- A  $108^\circ$                       C  $72^\circ$   
 B  $126^\circ$                       D  $54^\circ$

- 11 The diagram shows a circle, centre  $O$  and  $AOB$  is the diameter of the circle. Given  $AD = DC$ , find the value of  $x$ .

- A  $50^\circ$   
 B  $40^\circ$   
 C  $20^\circ$   
 D  $140^\circ$



12

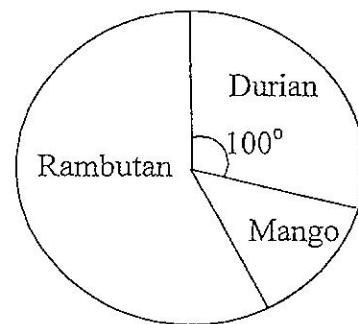
Score (goal)	1	2	3	4	5	6
Frequency	2	3	2	2	$x$	1

The table shows the number of goals scored in a football game. If the median score is 4, the minimum value of  $x$  is

- A 2                                      C 5  
 B 3                                      D 9

- 13 The pie chart above shows the sales of 3 types of fruit. If the sales of rambutans are two times that of durians and that the total sales of the three types of fruit is RM 180, how much is obtained from the sales of mangoes?

- A RM 150  
 B RM 120  
 C RM 50  
 D RM 30



- 14 In a Mathematics test, the mean score of 9 students is 6 while the mean score of another 6 students is 8. Find the mean score of the 15 students altogether.

- A 6                                      C 6.8  
 B 6.4                                  D 7.2

15 Given that the mean for the set of numbers 6, 4, x, 5, 7, 3, y is 6. The value of  $x + y =$

A 11                      C 17

B 15                      D 19

16  $x^9 y^2 \div x^3 y =$

A  $x^{12} y^3$                       C  $x^6 y^2$

B  $x^6 y$                       D  $x^3 y$

17  $p q^2 \times (3p^2 q)^2 \div 3p^2 q =$

A  $p^3 q^3$                       C  $3 p^2 q^2$

B  $3pq^3$                       D  $3 (pq)^3$

18  $(81p^2)^{-\frac{1}{4}} \times (64p^3)^{\frac{1}{3}} =$

A  $\frac{4}{3} p^{\frac{1}{2}}$                       B  $\frac{4}{3} p^{-\frac{1}{2}}$

C  $12p^{\frac{1}{2}}$                       D  $12p^{-\frac{1}{2}}$

19 
$$\frac{(8^{\frac{2}{3}})^{\frac{1}{2}} \times 7^{-\frac{1}{2}} \times 49^{\frac{1}{2}}}{(7^3)^{\frac{1}{2}}} =$$

A -2401                      C  $-\frac{119}{3}$

B  $\frac{2}{7}$                       D 14

20 Find the value of  $(\frac{2}{x})^{-1}$  if  $x = -1$ .

A -2                      C  $-\frac{1}{2}$

B -1                      D 1

Form 3 \_\_\_\_\_

Name : \_\_\_\_\_

Formative Test 2

Mathematics

April, 2012

Answer Sheet for Section A [Objective Questions]

1 (A) (B) (C) (D)

11 (A) (B) (C) (D)

21 (A) (B) (C) (D)

2 (A) (B) (C) (D)

12 (A) (B) (C) (D)

22 (A) (B) (C) (D)

3 (A) (B) (C) (D)

13 (A) (B) (C) (D)

23 (A) (B) (C) (D)

4 (A) (B) (C) (D)

14 (A) (B) (C) (D)

24 (A) (B) (C) (D)

5 (A) (B) (C) (D)

15 (A) (B) (C) (D)

25 (A) (B) (C) (D)

6 (A) (B) (C) (D)

16 (A) (B) (C) (D)

26 (A) (B) (C) (D)

7 (A) (B) (C) (D)

17 (A) (B) (C) (D)

27 (A) (B) (C) (D)

8 (A) (B) (C) (D)

18 (A) (B) (C) (D)

28 (A) (B) (C) (D)

9 (A) (B) (C) (D)

19 (A) (B) (C) (D)

29 (A) (B) (C) (D)

10 (A) (B) (C) (D)

20 (A) (B) (C) (D)

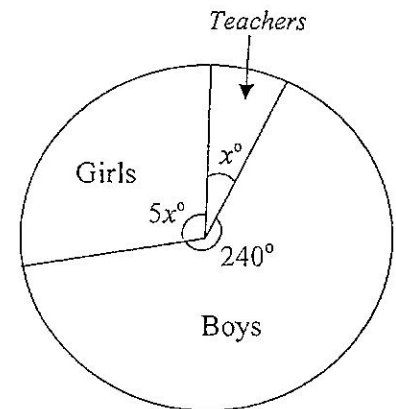
30 (A) (B) (C) (D)

Section B

Subjective Questions

1 The pie chart shows the number of pupils and teachers in a certain school.

(a) Calculate the value of  $x$ . [2 marks]



(b) If there are 45 teachers in the school, how many

(i) boys are there in the school? [2 marks]

( ii ) girls are there in the school ? [1 mark]

- 2 The table below shows the frequency distribution of the number of spelling mistakes in a composition made by each pupil in a class of 36. [5 marks]

No. of mistakes ( x )	0	1	2	3	4	5	6	7
No. of pupils ( f )	3	7	10	6	5	3	1	1

Find (a) the mode, (b) the median, (c) the mean of the distribution.

(a) Mode =

(c)

(b)

- 3 One of the interior angles of a polygon is  $95^{\circ}$  and the rest are each equal to  $169^{\circ}$ . Find the number of sides of the polygon. [2marks]

4 (a) Simplify each of the following : [2 marks each]

(i)  $(2a^3)^3 \div 2a^{-1} \times a^{-4}$

(ii)  $\frac{4a^{-2}b^{-4}}{16(a^3b)^{-1}} \div \frac{8a^{-3}b}{32(ab^3)^{-1}}$

(b) Evaluate the following.

$$4^{-2} + \left(\frac{1}{4}\right)^{-1} \div \left(\frac{1}{6}\right)^0$$

5 The mean of six numbers is 41. Three of the numbers are 32, 31 and 42. The remaining three numbers are each equal to  $x$ . Find the value of  $x$ . [2 marks]