

## SOUTHERN PROVINCIAL DEPARTMENT OF EDUCATION

### MID YEAR TEST - 2019

### GRADE 7

### MATHEMATICS

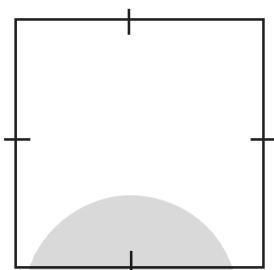
Name/ Index No :-- .....

Time : 2 Hours

#### Part I

I. Answers all the questions.

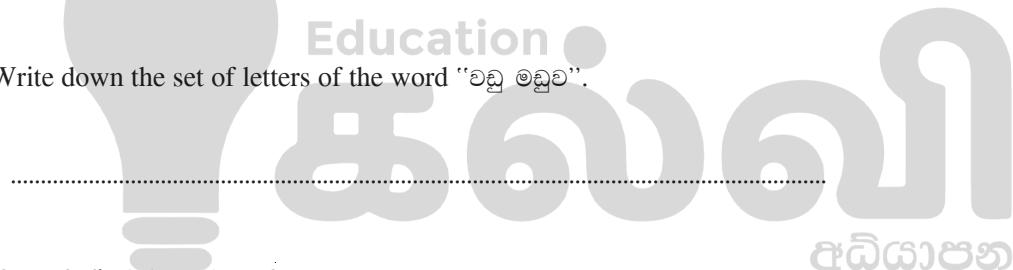
(1)



Draw the axes of symmetry of this square.

How many axes of symmetry? .....

(2) Write down the set of letters of the word "ව්‍යා මුළුව".



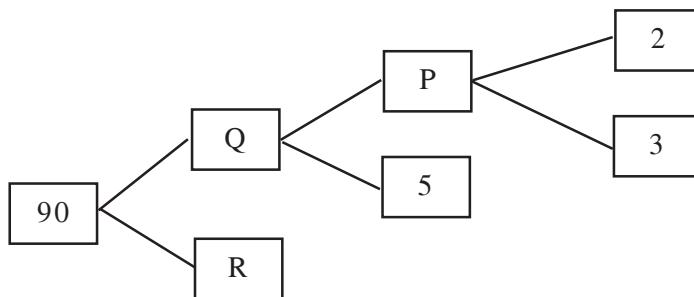
(3) If  $P = 2$  find the value of  $5P^3$ .

.....

(4) Simplify  $7 + 3 \times 5$

.....

(5) A factors tree is given below. Fill in the blanks represented by letters and complete it.



(6) If the statements given below are correct put (3) sign and if incorrect put (x) signs.

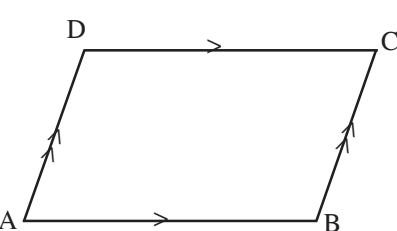
Numbers with the digital index 9 is divisible by 9 without a remainder.	
624 is divisible by 3 without a remainder.	
414 is divisible by 4 without a remainder.	

(7) Write  $\frac{4}{25}$  as a decimal number.

.....

(8) Write  $2 \times 2 \times P \times P \times P$  in index notation.

(9) "Sutin Martin" cartoon starts at 3.45 p.m. and ends at 4.20 p.m. Find the telecast time duration of the cartoon.

(10)  Name a pair of parallel lines in this figure.

.....

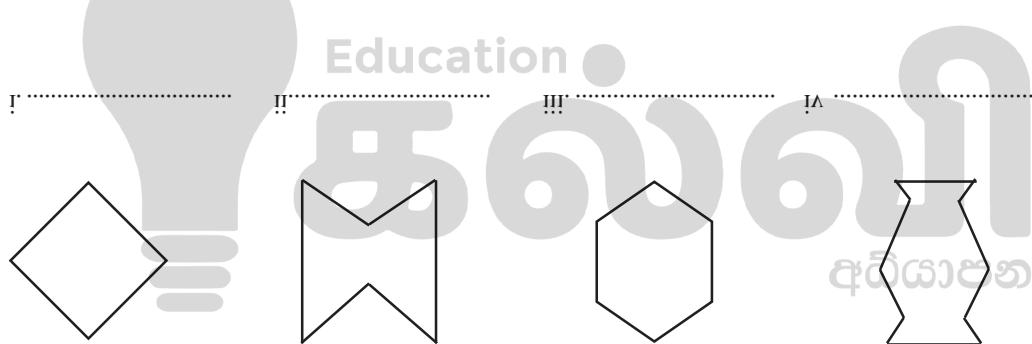
(11) Find the value of  $(+7) + (-2)$ .

.....

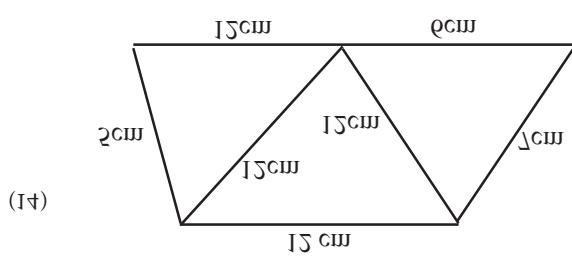
(12) In a solid there are 8 edges and 5 vertices. Find the numbers of faces of it.

.....

(10) Draw a circle of radius 3 cm.



(11) State if the below polygons are convex or concave.



கீழ்க்கண்ட ஒரு முக்கோணத்தை ஒத்துக்கொண்டு ஒரு சமபக்க முக்கோணத்தை படித்து விடு.

எது என்று அழைகிறீர்?

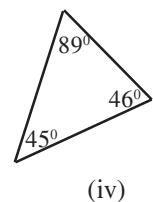
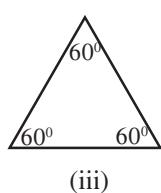
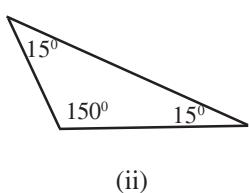
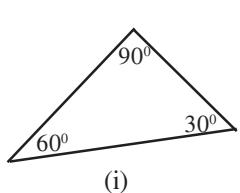
(12) A number is represented by  $B$ . Express an algebraic expression for the number which is 3 less than the half of  $B$ .

(17) Write down the below masses in ascending order.

10 g, 100mg, 1kg

.....

(18) Write each of the below triangle is an acute angled triangle, an obtuse angled triangle or a right triangle.



(19) If  $x = 3$  find the value of  $2x - 1$ .

(20) Find the value  $162.4 \div 4$



## Part II

**Write down the answers for only 5 questions.**

(1) Distance to the school from Nimal's house is 6km 250m.

(a) Nimal travels by foot and then he travels 5km 470m by the school van. Find the distance travelled by foot. (03 m.)

(b) If Nimal went school during the 5 days of a week. Find the total distance he traveled by foot during 5 days. (03 m.)

(c) Mother went to the market and bought the following things.

Sugar	1 kg 750g
Carrot	450g
Snake gourd	500g
Coriander	220g
Rice	5kg 400g

Find the total mass of the items bought by mother. (03 m.)

(d) Mass of a packet of rice is 5kg 400g. Find the mass of 6 packets of rice. (03 m.)

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(2) (i) Draw an angle such that  $\hat{PQR} = 45^\circ$  using the protractor. (03 m.)

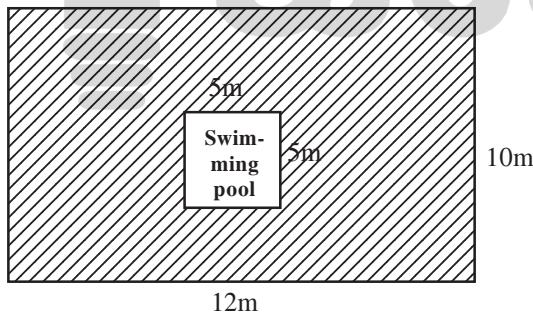
(ii) Construct a parallel line which is parallel to PQ and 5cm away from PQ on the above figure (03 m.)

(iii) Name the intersection point of the above parallel line and QR as "S". (02 m.)

(iv) Measure the angle  $\hat{QPS}$  and write the magnitude. (02 m.)

(v) Which type of triangle is QPS triangle. (01 m.)

(3) (a) The below figure represents how a swimming pool is constructed in a playground.



(i) Find the perimeter of the playground. (01 m.)

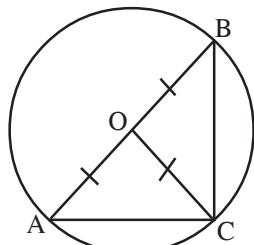
(ii) Find the perimeter of the swimming pool. (01 m.)

(iii) Find the area of the swimming pool. (01 m.)

(iv) Find the area of the playground. (02 m.)

(v) Owner decided to grow grass of the shaded region. Find the area of that region. (03 m.)

(b)



(i) Name the centre. (01 m.)

(ii) What is the name of the line AB? (01 m.)

(iii) How many times is the length of AB as the length of OC? (02 m.)

(4) (i) Write 15 as a product of prime factors. (02 m.)  
(ii) Find the Highest common factor of 12, 15, 54. (03 m.)  
(iii) Find the least common multiple of 9, 12, 18. (03 m.)  
(iv) Sasvidu is suffering from cold. He had all the 3 medicines once at 8.00 a.m.  
    | Medicine A - twice a day.  
    | Medicine B - every 6 hours.  
    | Medicine C - every 4 hours. (04 m.)

At what time he has to drink all the 3 medicines at once again.

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(5) (i) Convert  $3\frac{2}{3}$  in to an improper fraction. (01 m.)  
(ii) Express  $\frac{29}{4}$  as a mixed number. (01 m.)  
(iii) Filling the blanks using  $<$ ,  $>$ .  
    (a)  $\frac{5}{8} \dots \frac{5}{7}$       (c)  $\frac{4}{5} \dots \frac{2}{3}$   
    (b)  $3\frac{1}{2} \dots 3\frac{1}{4}$       (d)  $\frac{15}{9} \dots \frac{2}{9}$  (04 m.)  
(iv) Simplify.  
    (a)  $3\frac{1}{5} + 4\frac{2}{3}$       (b)  $4\frac{5}{6} - 2\frac{1}{3}$  (02  $\times$  02 m.)  
(v) Nimala want 6 pieces of ribbon each 2.45m in length. Find the length of ribbon she must buy. (02 m.)

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(6) (i) Raj Kumar has Rs. $x$ . Hakeem has Rs. 5 greater than the amount Raj Kumar has. Asanka has twice the amount that Raj Kumar has.  
    (a) Write the amount Hakeem has using  $x$ . (02 m.)  
    (b) Write the amount Asanka has using  $x$ . (02 m.)  
    (c) Write the total amount they have using  $x$ . (02 m.)  
    (d) If Raj Kumar has Rs.10. Find the amount of money others have seperately. (03 m.)

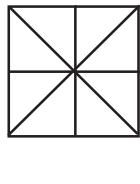
(ii) Solve.  $8P + 7 = 79$  (03 m.)

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**MATHEMATICS - ANSWER GUIDE**

**Part I**

(1)



4

(2) {∅, {∅}, {∅}}

(3)  $5 \times 8 = 40$ 

(4) 22

(5)  $P = 6$ ,  $Q = 30$ ,  $R = 3$ 

(6) 3 3 7

(7) 0, 16

(8)  $2^2 \times P^3 = 4P^3$ 

(9) 35 minutes

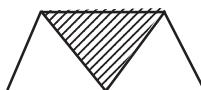
(10) AB and DC  
AD and BC

(11) +5

(12) 5

(13)  $\frac{x}{2} - 3$ 

(14)



(15) Convex, Concave, Convex, Concave

(16) -

(17) 100mg, 10g, 1kg

(18) Right angled  $\Delta$ ,  
Obtuse angled  $\Delta$ ,  
Acute angled  $\Delta$ ,  
Acute angled  $\Delta$ 

(19) 5

(20) 40.6 (  $2 \times 20 = 40$  m.)

(1) a) km m  

$$\begin{array}{r} 6 & 250 \\ 5 & 470 \\ \hline 0 & 780 \text{ m} \end{array}$$

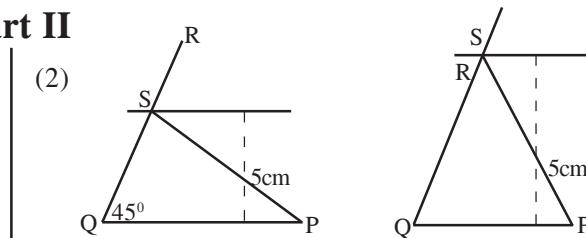
(2)

b)  $780 \text{ m} \times 10$   
 $7800 \text{ m} = 7\text{km } 800\text{m}$

c) 8 kg 320g

d) 5 kg 400g  $\times$  4  
 $32 \text{ kg } 400\text{g}$

**Part II**



(3) a) (i)  $12 + 10 + 12 + 10 \text{ m} = 44\text{m}$

(ii)  $5\text{m} + 5 \text{ m} + 5 \text{ m} + 5 \text{ m} = 20 \text{ m}$

(iii)  $5 \times 5\text{m}^2 = 25 \text{ m}^2$

(iv)  $12 \times 10 = 120\text{m}^2$

(v)  $120\text{m}^2 - 25\text{m}^2 = 95 \text{ m}^2$

b) (i) O

(ii) Diameter

(iii) Twice

(4) (i)  $3 \times 5$   
 (ii) HCF = 3  
 (iii) LMC = 36  
 (iv) After 12 hours  
 8.00 p.m.

(5) (i)  $\frac{11}{3}$   
 (ii)  $7\frac{1}{4}$   
 (iii) a)  $<$   
 c)  $>$   
 b)  $>$   
 d)  $>$   
 (iv) a)  $3\frac{1}{5} + 4\frac{2}{3}$       b)  $4\frac{5}{6} - 2\frac{1}{3}$   
 $7\left(\frac{3}{15} + \frac{10}{15}\right)$        $2\left(\frac{5}{6} - \frac{1}{3}\right)$   
 $7\frac{13}{15}$        $2\left(\frac{5}{6} - \frac{2}{6}\right)$   
 $2\frac{3}{6} = 2\frac{1}{2}$   
 (v)  $2.45\text{m} \times 6$   
 $14.70\text{ m}$

(6) (i) a)  $x + 5$   
 b)  $2x$   
 c)  $x + x + 5 + 2x$   
 $4x + 5$   
 d) Raj Kumar Rs. 10  
 Hakeem Rs. 15  
 Asanka Rs. 20

$$\begin{array}{r} (ii) \quad 8P + 7 = 79 \\ \quad \quad \quad 8P = 72 \\ \hline \quad \quad \quad P = 9 \end{array}$$

Education  
**கல்வி**  
 அடியாளத்துறை