පළමු වාර පරීක්ෂණය - 10 ශ්‍රේණිය - 2020

First Term Test - Grade 10 - 2020

ගණිතය - පිළිතුරු පත්‍රය

I පත්‍රය

A කොටස

(1) 3.5 ---------- 2

(2) $x^2 - 3x - 10$ ---------- 2
$x^2 + 2x - 5x - 10$ ---------- 1

(3) { 3, 7, 8 } ---------- 2

(4) 110^0 ---------- 2
ප්‍රතිමුඛ කෝණය 70^0 ට ---------- 1

(5) 13 ---------- 2

(6) 25% ---------- 2
100න් $\frac{100}{400} \times 100\%$ ---------- 1

(7) 65^0 ---------- 2
$90^0 - 25^0$ ---------- 1

(8) 28cm ---------- 2
$\frac{1}{4} \times 2 \times \frac{22}{7} \times r = 44$ ---------- 1

(9) $1/X^2$ ---------- 2
X^{-2} ---------- 1

(10) $(x - 6)(x + 1)$ ---------- 2
$x^2 - 6x + x - 6$ ---------- 1

(11) 10cm ---------- 2
$BC \times 7 = 14 \times 5$
හෝ
$\frac{14 \times 5}{7}$ ---------- 1

(12) $6x^2y^2$ ---------- 2

(13) 70^0 ---------- 2
$A\hat{C}B = x$ හෝ $2x = 140^0$ ---------- 1

(14) 5cm ---------- 2
$\frac{1}{2} \times 6 \times AD = 15$ ---------- 1

(15) 40^0 ---------- 2
$3x = 120^0$ ---------- 1

(16) $\frac{3-x}{7}$ ---------- 2
$\frac{5-x-2}{7}$ ---------- 1

(17) පා. කෝ. පා. ---------- 2

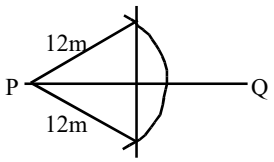
(18) දින 4 ---------- 2
$\frac{8 \times 6}{12}$ ---------- 1

(19) (i) $100cm^2$ ---------- 2
$\frac{1}{2} \times 40 \times 5$ ---------- 1

(20) 60^0 ---------- 2
$B\hat{A}C = 50^0$ ---------- 1

(21) $x = 5$ ---------- 2
$7 - 2x + 4 = 1$ ---------- 1

(22)



2

(23) $\frac{13}{100}$ ---------- 2

(24) (i) 80^0 ---------- 1
(ii) 70^0 ---------- 1 - 2

(25) (i) 2 ---------- 1
(ii) 3 ---------- 1 - 2

Answer

B කොටස

(1) (i) $\frac{5}{6}$ ---------- 1

$\frac{5}{6}\times\frac{3}{5}$ ---------- 1

$\frac{1}{2}$ ---------- 1 - 3

(ii) $\frac{1}{6}+\frac{1}{2}$ ---------- 1

$\frac{2}{3}$ ---------- 1

$\frac{1}{3}$ ---------- 1 - 3

(iii) $1800\,ml$ ---------- 2

$600\div\frac{1}{3}$ ---------- 1

(iv) $1800\times\frac{1}{6}$ ---------- 1

$300\,ml$ ---------- 1 - 2

---------- 10

(2) (i) $2\times\frac{22}{7}\times35\times\frac{1}{4}$ ---------- 1

55cm ---------- 1 - 2

(ii) 13 cm ---------- 2

5cm දෑකීම $5^2 + 12^2$ ---------- 1

(iii) 40 + 35 + 12 + 13 + 55 ---------- 1

155 cm ---------- 1 - 2

(iv) $40\times35=1400cm^2$ ---------- 1

$\frac{22}{7}\times35\times35\times\frac{1}{4}$ ---------- 1

962.5 cm^2

$\frac{1}{2}\times12\times5=30cm^2$ ---------- 1

$467.5cm^2$ ---------- 1 - 4

---------- 10

(3) (i) 360 - (117 + 90 + 45) ---------- 1

54^0 ($\frac{108}{2}$ න්) ---------- 1 - 2

(ii) $\frac{360\times5}{45}$ ---------- 1

40 ---------- 1 - 2

(iii) $\frac{40\times117}{360}$ හෝ $\frac{117}{9}$ ---------- 1

13 ---------- 1 - 2

(iv) $\frac{40}{4}=10$ ---------- 1

10 + 10 = 20 ---------- 1

$\frac{360\times20}{45}$ ---------- 1

160^0 ---------- 1 - 4

---------- 10

(4) (i) 50×8 ---------- 1

දින 400 ---------- 1 - 2

(ii) $\frac{10000}{400}$ ---------- 1

$25\,l$ ---------- 1 - 2

(iii) $10000 - 50\times3\times25$ ---------- 1

$6250\,l$ ---------- 1 - 2

(iv) 6250 - 250 = 6000 ---------- 1

$\frac{6000}{40\times25}$ ---------- 1

දින 6 ---------- 1

6 + 3 = දින 9 ---------- 1 - 4

---------- 10

(5) (i) නිවැරදි පෙදෙස් 4 ට ---------- 4

(ii) නිවැරදි පිළිතුරට ---------- 2

(iii) $(X\cup Y)'$ ---------- 2

(iv) නිවැරදි උපකුලක දෙකකට ---------- 2

---------- 10

II පත්‍රය

A කොටස

(1) (i) රු. 9 000 ---------- 1
රු. 159 000 ---------- 1
$\frac{120\,000 \times 90}{100}$ ---------- 1
රු. 108 000 ---------- 1
රු. 73 600 ---------- 1
108 000 + 73 600 ---------- 1
රු. 181 600 ---------- 1
181 600 - 159 000 ---------- 1
රු. 22 600 ---------- 1
22 600 > 22 000 ---------- 1
---------- 10

(2) (i) 3, -1 ---------- 1
---------- 1 - 2

(ii) නිවැරදි අක්ෂ පද්ධතියට ---------- 1
ලක්ෂ්‍ය ලකුණු කිරීම ---------- 1
ප්‍රස්තාරය ඇඳීම ---------- 1 - 3

(iii) 2 ---------- 1
(iv) ප්‍රස්තාර මත ලක්ෂ්‍ය දෙකක්වත් ලකුණු කර $y = x$ ඇඳීමට ---------- 3
(1, 1) ---------- 1 - 4
---------- 10

(3) (i) $(x + 5)^2 - (x + 1)(x - 3)$ ---------- 2
$x^2 + 10x + 25 - (x^2 - 2x - 3)$ ---------- 2
$12x + 28$ ---------- 1 - 5

(ii) $12x + 28 = 88$ ---------- 1
$12x = 60$ ---------- 1
$x = 5$m
10 m ---------- 1
100 m^2 ---------- 2 - 5
---------- 10

(4) (a) $2x = 6$ ---------- 1
$x = 3$ ---------- 1
ආදේශයට ---------- 1
$y = 5$ ---------- 1 - 4

(b) (i) $2x^2 - 4x + 3x - 6$ ---------- 1
$2x(x - 2) + 3(x - 2)$ ---------- 1
$(x - 2)(2x + 3)$ ---------- 1 - 3

(ii) $5(16 - x)$ ---------- 1
$5(4^2 - x^2)$ ---------- 1
$5(4 - x)(4 + x)$ ---------- 1 - 3
---------- 10

(5) (i) 9 ---------- 1
(ii) 6 ---------- 1
(iii) 5 ---------- 1
(iv) 12, 40, 90, 77, 64, 45 ---------- 1
328 ---------- 1
328/50 ---------- 1
6.56 හෝ 6.5 ---------- 1
7 ---------- 1 - 5

(v) $\frac{7}{2} \times 10$ ---------- 1
35 ---------- 1 - 2
---------- 10

(6) (i) මිනුම් දක්වා ඇති දළ රූපයට ---------- 2

(ii) දිගංශය, පරිමානය B ට ---------- 2
දිගංශය, පරිමාණය C ට ---------- 2
D ට ---------- 1 - 5

(iii) $312^0 \pm 2^0$ ---------- 1

(iv) 5cm $\pm$ 0.1cm ---------- 1
100m $\pm$ 2m ---------- 1 - 2
---------- 10

B කොටස

(7) (i) $3 \times 11 + 1$ ---------- 1
34 ---------- 1 - 2

(ii) $6n - 5 = 55$ ---------- 1
$n = 60/6$ ---------- 1
$n = 10$ ---------- 1 - 3

(iii) $3n + 1 - (6n - 5)$ ---------- 1
$-3n + 6$ ---------- 1 - 2

(iv) 3, 0 ---------- 2
-3 ---------- 1 - 3
---------- 10

(8) (i) $30 \times 20 \times 10$ ---------- 1
6 000 *ml* හෝ 6 *l* ---------- 1 - 2

(ii) 240×5 ---------- 1
1 200 cm^3 ---------- 1 - 2

(iii) 4 200 + 1 200 ---------- 1

$5\,400\ ml$ ---------- 1

$\frac{5\,400}{30\times 20}$ ---------- 1

9cm ---------- 1 - 4

(iv) $1\,000\ cm^3$ ---------- 1

10cm ---------- 1 - 2

---------- 10

(9) (i) PQ ඇැඳීමට ---------- 1

(ii) ලම්බ සමච්ඡේදකයට ---------- 1

O ට ---------- 1 - 2

(iii) 60^0 නිර්මාණයට ---------- 2

PQR ත්‍රිකෝණයට ---------- 1 - 3

(iv) කෝණ සමච්ඡේදකයට ---------- 2

M ලකුණු කිරීමට ---------- 1 - 3

(v) වෘත්තය නිර්මාණයට ---------- 1

---------- 10

(10) (i) AB = DC (සම්මුඛ පාද) ---------- 1

$B\hat{A}P = D\hat{C}Q$ (ඒකාන්තර කෝණ) ---------- 1 - 2

$A\hat{P}B = C\hat{A}D = 90^0$

$ABP\Delta \equiv CDQ\Delta$ (කෝ. කෝ. පා.) ---------- 1

අංගසම ත්‍රිකෝණවල අනුරූප අංග සමාන වේ. ---------- 1

AP = QC ---------- 1

AP - QP = QC - QP (ප්‍රත්‍යක්ෂ) ---------- 1 - 4

AQ = PC

(ii) පිටපත් කර ලම්බක ඇැඳීම ---------- 2

$\frac{1}{2}.AB.PX = \frac{1}{2}.DC.QY$ ---------- 1

AB = DC ---------- 1 - 4

PX = QY

---------- 10

(11) (i) $F\hat{C}E = B\hat{A}C$ (අනුරූප කෝණ) ---------- 1

$B\hat{C}F = A\hat{B}C$ (ඒකාන්තර කෝණ) ---------- 1

$F\hat{C}E + B\hat{C}F = B\hat{A}C + A\hat{B}C$ ---------- 1 - 3

$B\hat{C}E = A\hat{B}C + A\hat{B}C$

(iii) $B\hat{A}D = D\hat{A}C$ ---------- 1

$B\hat{A}D = D\hat{F}C$ ---------- 1

$\therefore D\hat{A}C = D\hat{F}C$ (ප්‍රත්‍යක්ෂ) ---------- 1

AC = CF ---------- 1 - 4

(iii) $A\hat{B}C = 60^0$ ---------- 1

$A\hat{C}B = 60^0$ ---------- 1

$B\hat{A}C = 60^0$ ---------- 1 - 3

---------- 10

(12) (i) {2, 4, 6, 8, 10} ---------- 1

(ii) { 5, 6, 7, 8, 9, 10} ---------- 1

(iii) S = {1, 2, 3, 4, 5, 6, 7, 8,9 10} ---------- 2

(iv) $\frac{5}{10}$ ---------- 2

(v) $\frac{2}{10}$ ---------- 2

(vi) $\frac{3}{10}$ ---------- 2

---------- 10