THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

WS 2
MT(104)E

MATHEMATICS WORK SHEET 2021-22 STANDARD X

TRIGONOMETRY
ANSWER KEY

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1. (a) DE = $\frac{6}{2}$ = 3cm

(b) Area of parallelogram(സമാന്തരികത്തിന്റെ പരപ്പളവ്) = b×h

= 12 × 3

= 36 cm^2

2. (a) BP = AP= 10 cm

(b) PC = $10\sqrt{3}$ cm

(c) BC = $10 + 10\sqrt{3}$ cm

3. (a) $\angle C = 55^0$

(b) AC = AB = 6 cm

(c) Area (പരപ്പളവ്) = $\frac{6\times6\times\sin(70)}{2}$

= 18 × 0.93

= 16.74cm^2

4. BC = 6 cm

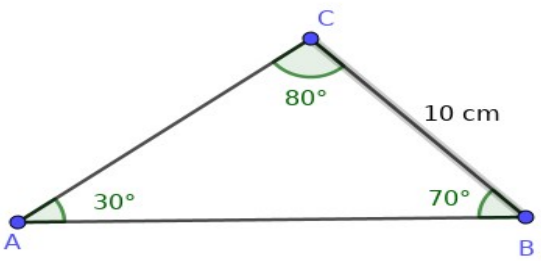
AB = $6\sqrt{3}$ cm

Perimeter (ചുറ്റളവ്) = $2(6+ 6\sqrt{3})$

= $12 +12\sqrt{3}$ cm

Area (പരപ്പളവ്) = $6 \times 6\sqrt{3} = 36\sqrt{3}$ cm^2

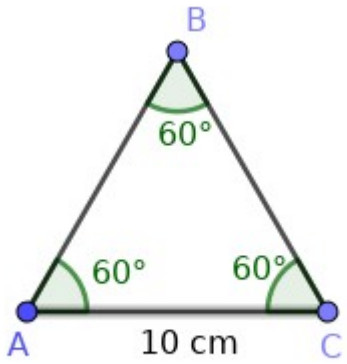
5.



d = $\frac{10}{\sin 30}$ = $\frac{10}{\frac{1}{2}}$ = 20 cm

AC = d sin 70^0 = 20 × 0.94 = 18.8 cm
AB = d sin 80^0 = 20 × 0.98 = 19.6 cm

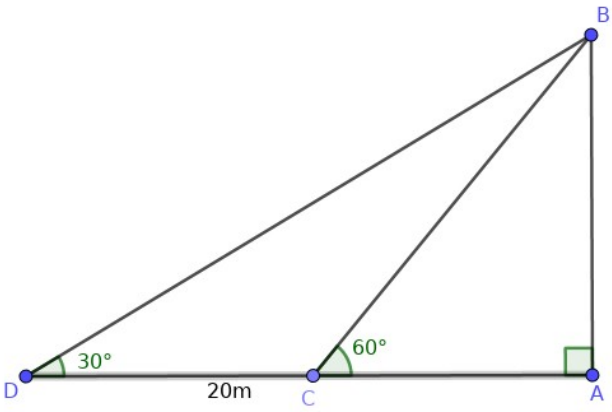
6.



$$d = \frac{10}{\sin 60} = \frac{10}{\frac{\sqrt{3}}{2}} = \frac{20}{\sqrt{3}} \text{ cm}$$

$$r = \frac{10}{\sqrt{3}} = \frac{10\times\sqrt{3}}{3} \text{ cm}$$

7.



∠ DBC = 30^0
BC = 20 m
AC = 10 m
width of the river (തോടിന്റെ വീതി) = 10 m