

7/12/20

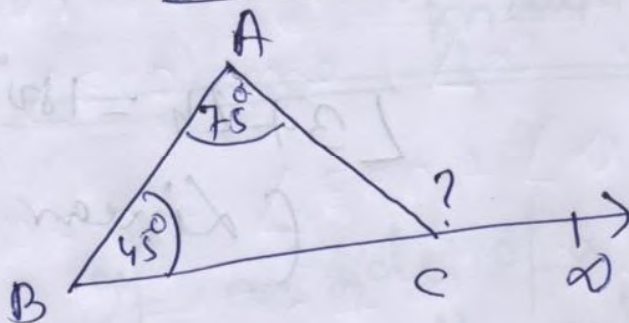
class-VI

Subject:- Math.

EX = 15B.

page:-186.

1.



We know that,
an exterior angle
is equal to sum of the opposite
angles in a triangle are equal.

$$\therefore \angle ACD = \angle A + \angle B$$

$$\Rightarrow \angle ACD = 75^\circ + 45^\circ$$

$$\Rightarrow \angle ACD = 120^\circ //$$

4.

given that,

Exterior angle = 110° (given)

and interior opposite angles
are $2x^\circ$ and $3x^\circ$ (let)

We know that, an exterior angle
is equal to sum of the opposite
angles in a triangle are equal.

$$\therefore 2x^\circ + 3x^\circ = 110^\circ$$

$$\Rightarrow 5x = 110$$

$$\Rightarrow x = \frac{110}{5}$$

$$\therefore x = 21$$

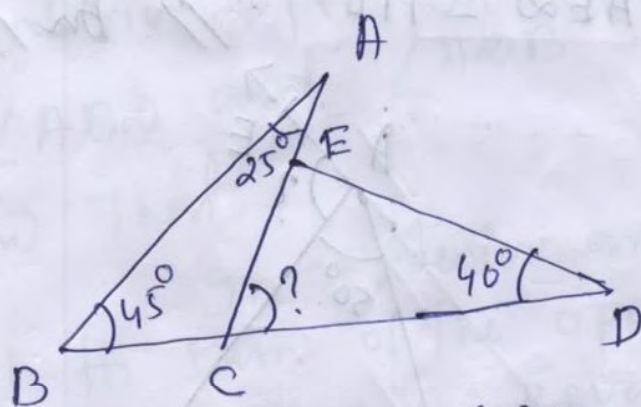
Therefore;

angles are, Interior opposite

$$2x = 2 \times 21 = 42^\circ$$

$$3x = 3 \times 21 = 63^\circ \quad \text{Ans.} //$$

Q.



gn figure; we can see that,
gn $\triangle ABC$; exterior angle $\angle ACD$ and
Interior opposite angles $\angle A$ and $\angle B$.

we know that, gn an exterior angle
is equal to sum of the opposite angles
in a triangle are equal.

$$\angle ACD = \angle A + \angle B$$

$$\Rightarrow \angle ACD = 25^\circ + 45^\circ$$

$$\Rightarrow \angle ACD = 70^\circ$$

Similarly, in $\triangle CDE$ from;

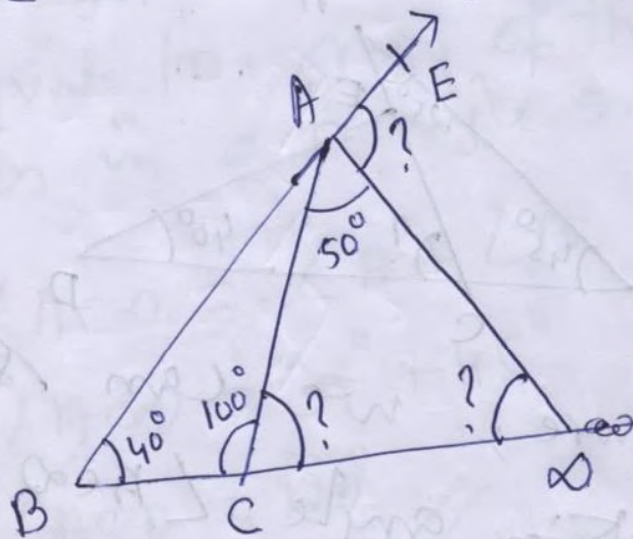
Exterior angle $= \angle AED$.
and Interior opposite angles
are; $\angle ECD$ and $\angle C$.

$$\therefore \angle AED = \angle ECD + \angle C$$

$$\Rightarrow \angle AED = 70^\circ + 40^\circ \quad [\because \angle ACD = \angle ECD = 70^\circ]$$

$$\Rightarrow \angle AED = 110^\circ \quad // \text{ Ans } //$$

7.



In figure, we can see that,

$$\angle ACB + \angle ACD = 180^\circ \quad (\text{linear pair})$$

$$\Rightarrow 100^\circ + \angle ACD = 180^\circ$$

$$\Rightarrow \angle ACD = 180^\circ - 100^\circ$$

$$\therefore \angle ACD = 80^\circ \quad //$$

gn $\triangle ACD$ from,

$$\angle ACD + \angle ADC + \angle CAD = 180^\circ$$

$$\Rightarrow 80^\circ + \angle ADC + 50^\circ = 180^\circ$$

$$\Rightarrow \angle ADC = 180^\circ - 130^\circ$$

$$\Rightarrow \angle ADC = 50^\circ$$

now, gn $\triangle ABC$ from,

$$\text{Exterior} = \angle DAE$$

and interior opposite angles

$$\angle ABC \text{ and } \angle ACB$$

we know that,

gn Exterior angle is
equal to sum of the opposite angles
in a triangle are equal,

$$\angle EAD = \angle B + \angle C$$

$$\Rightarrow \angle EAD = 40^\circ + 50^\circ$$

$$\Rightarrow \angle EAD = 90^\circ$$

$$[\because \angle ADC = \angle C = 50^\circ]$$

H/W

Ex = 15B (1 to 8) all.

please students homework do
at home and take care health,

class-vii

subject:- Math.

Ex = 15 c.

page = 188

* The sum of any two of these numbers is greater than the third.

For example. 5, 7, 9

$$\text{Here, } 5+7=12 > 9$$

$$5+9=14 > 7$$

$$7+9=16 > 5$$

1. (i) 1cm; 1cm; 1cm.

$$1+1=2 > 1$$

yes;

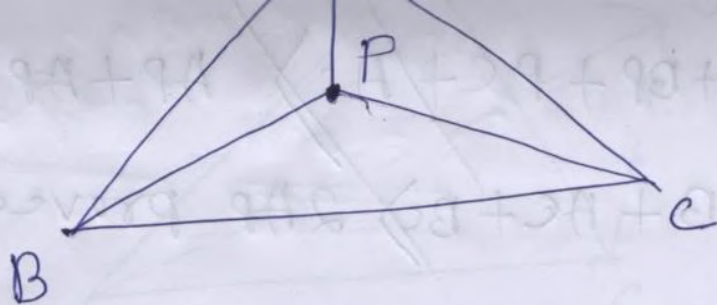
can make a triangle.

(ii) 7cm; 8cm; 15cm.

$$7+8=15$$

(15)

$\therefore$ no; NO make a triangle.

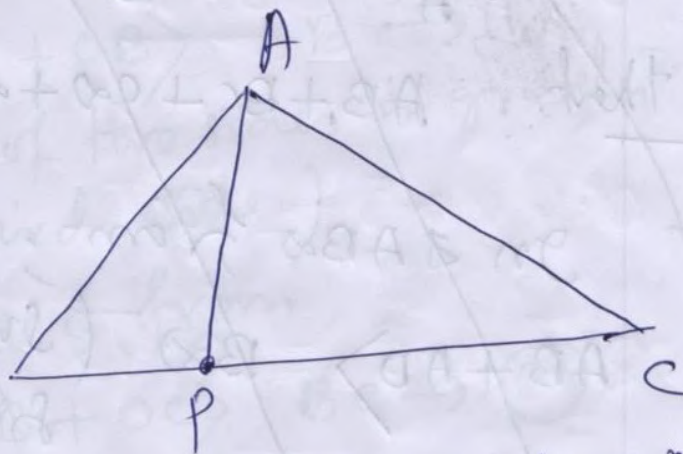


$$(i) \quad PA + PB > AB$$

$$(ii) \quad PB + PC > BC$$

$$(iii) \quad AC < PA + PC$$

Σ.



prove that, $(AB + BC + AC) > 2AP$.

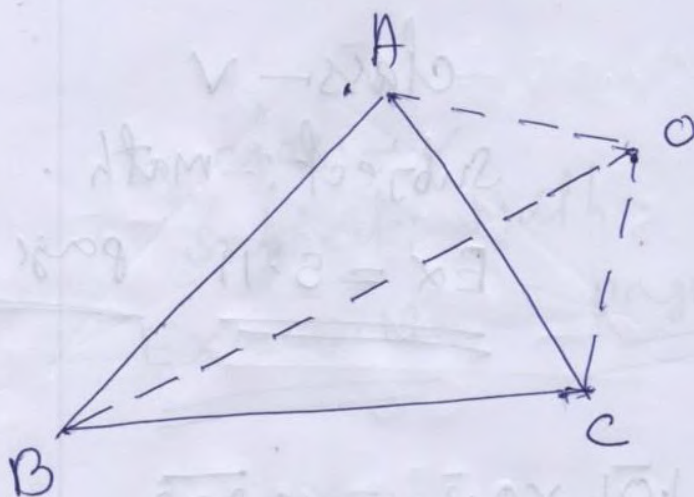
proof: Since, in $\triangle ABP$ from;
 $AB + BP > AP$ (sum of two side ~~numbers~~ is greater than third side) $\rightarrow (1)$

Again, in $\triangle APC$ from,

$$AC + PC > AP \rightarrow (2)$$

On eqⁿ no. (1) + (2);
 $AB + BP + PC + AC > AP + AP$
 $\Rightarrow AB + BC + AC > 2AP$ proved //

7.



prove that, $2(OA + OB + OC) > (AB + BC + CA)$

proof:

gn $\triangle AOB$ from,

$$OA + OB > AB \rightarrow (1)$$

(Sum of two sides is greater than third side.)

gn $\triangle BOC$ from,

$$OB + OC > BC \rightarrow (2)$$

Similarly, gn $\triangle AOC$ from,

$$OA + OC > AC \rightarrow (3)$$

gn equation numbers (1+2+3),

$$OA + OB + OB + OC + OA + OC > AB + BC + CA$$

$$\Rightarrow 2OA + 2OB + 2OC > AB + BC + CA$$

$$\Rightarrow 2(OA + OB + OC) > AB + BC + CA$$

proved.

Hfw EX=15C (1 to 7) all.