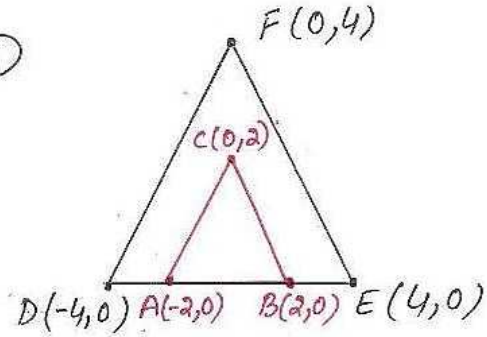
(1)



$AB = \sqrt{(2+2)^2 + (0-0)^2}$

$= \sqrt{16}$

$= 4$ units

$BC = \sqrt{(0-2)^2 + (2-0)^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= 2\sqrt{2}$ units

$CA = \sqrt{(-2-0)^2 + (0-2)^2}$

$= \sqrt{4+4}$

$= \sqrt{8}$

$= 2\sqrt{2}$ units

$DE = \sqrt{(4+4)^2 + (0-0)^2}$

$= \sqrt{64}$

$= 8$ units

$EF = \sqrt{(0-4)^2 + (4-0)^2}$

$= \sqrt{16+16}$

$= \sqrt{32}$

$= 4\sqrt{2}$ units

$\frac{AB}{DE} = \frac{4}{8}$ 1/2

$\frac{BC}{EF} = \frac{2\sqrt{2}}{4\sqrt{2}}$

$= \frac{1}{2}$

$\frac{CA}{FD} = \frac{2\sqrt{2}}{4\sqrt{2}}$

$= \frac{1}{2}$

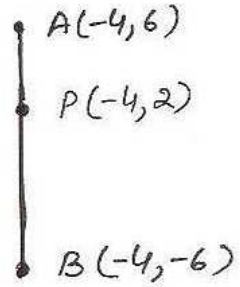
$\because \frac{AB}{DE} = \frac{BC}{EF} = \frac{CA}{FD}$

$\therefore \triangle ABC \sim \triangle DEF$ by SSS

True

True $\because$ all 3 points lie on $x=-4$

or



$BP = \sqrt{(-4+4)^2 + (2+6)^2}$

$= \sqrt{64}$

$= 8$ units

$PA = \sqrt{(-4+4)^2 + (6-2)^2}$

$= \sqrt{16}$

$= 4$ units

$BA = \sqrt{(-4+4)^2 + (6+6)^2}$

$= \sqrt{144}$

$= 12$ units

$BP + PA = 8+4$

$= 12$

$\because BA = BP + PA$

$\therefore$ P lies on AB