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Q4) Given,
5 notebooks and 3 pens = 190/-
3 notebooks and 2 pens = 118/-
let us take notebook = (n)
pens = (p)
So,
$5n + 3p = 190/-$ → eqn①
$3n + 2p = 118/-$ → eqn②
Now,
Multiply eqn① with 2 on both sides &
Multiply eqn② with 3 on both sides so that
components of p becomes equal.

eqn① = $(2)(5n+3p) = (2)(190)$
$10n + 6p = 380$
eqn② = $(3)(3n+2p) = (3)(118)$
$= 9n + 6p = 354$
Now,
eqn① - eqn②
$10n + 6p (-) (9n + 6p) = 380 - 354$
$10n + 6p - 9n - 6p = 26$
$1n = 26$
∴ (Cost of 1 notebook = 26/-)
Now,
From eqn① implement value of 1n
$5n + 3p = 190$
$5(26) + 3p = 190$
$130 + 3p = 190$
$3p = 190 - 130$
$p = 60/2 \Rightarrow 20/-$

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Q3) Given,

15 apples + 10 oranges = ₹290

12 apples + 18 oranges = ₹324

let us takes apple = (a)

orange = (o)

So,

$15a + 10o = 290/- \rightarrow$ eqn①

$12a + 18o = 324/- \rightarrow$ eqn②

Now,

~~Multiply eqn~~

Simplify eqn② with 2

$\frac{\cancel{12}^{6}a}{\cancel{2}} + \frac{\cancel{18}^{9}o}{\cancel{2}} = \frac{324}{2}$

Now,

~~Simplified~~

Simplified eqn② = $6a + 9o = 162$

Now,

eqn① multipy with (2)

eqn② multipy with (5) (Simplified)

$2(15a + 10o) = 2(290)$

$30a + 20o = 580$

&

$5(6a + 9o) = (162)(5)$

$30a + 45o = 810$

Now

eqn① - eqn②

$30a + 20o - 30a - 45o = 810 - 580$

$25o = 290$

$o = \frac{290}{25} \Rightarrow$ ₹9.2

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$15a + 10(9.2) = 290$
$15a + 92 = 290$
$15a = 290 - 192$
$15a = 198$
$a = \frac{198}{15} = 13.2$

$\therefore$ 1 apple = 13.2
1 orange = 9.2

T2) proof of (i) $\triangle ABC \cong \triangle ACD$
We consider the triangles $\triangle ABD$ & $\triangle ACD$

1) AB = AC (Given, since $\triangle ABC$ is an isosceles $\triangle$le)
2) DB = DC (Given, since $\triangle DBC$ is an isosceles $\triangle$le)
3) AD = AD (common side to both triangles)

Since, $\triangle ABD \cong ACD$

Proof of (ii) $\triangle ABP \cong \triangle ACP$
Now, we consider