Exercise 11D

Question 1:

$\frac{4}{5}, a, 2$ are in AP

$\therefore \quad a-\frac{4}{5}=2-a \text{ or } 2a=2+\frac{4}{5}=\frac{14}{5}$

$\Rightarrow \quad a=\frac{7}{5}$

Question 2:

$(x+2), 2x, (2x+3)$ are in AP

$\therefore 2x-(x+2)=(2x+3)-2x$

or $\quad 4x=(x+2)+(2x+3)$

$\Rightarrow \quad 4x=3x+5 \quad \text{or} \quad x=5$

Question 3:

$(2p+1), 13, (5p-3)$ are in AP

$\therefore \ 13-(2p+1)=(5p-3)-13 \text{ or } 26=2p+1+5p-3$

$\Rightarrow 26=7p-2 \quad \text{or} \quad 7p=28$

$\therefore \ p=\frac{28}{7}=4$

Question 4:

(2p - 1), 7, 3p are in AP

$\therefore$ 7 - (2p - 1) = 3p - 7 or 7-2p + 1=3p - 7

$\Rightarrow$ 5p = 15

$\therefore$ p = 3

Question 5:

$n^{th}$ term of AP $= T_n = 3n+5$

Put $n=1, \quad T_1=3+5=8$

Put $n=2, \quad T_2=3\times 2+5=11$

Common difference $= T_2-T_1=11-8=3$

Thus, common difference = 3

********** END **********