## Essential Skills 10

The skills in this series of worksheets appear frequently.
These are the GIFTS you must take to succeed

## Section Formula



Find the coordinates of $P$ on each:

1. $A(5,6,-1)$ and $C(8,-3,8)$ split in the ratio $1: 2$
2. $\quad A(-2,3,1)$ and $C(6,-1,13)$ split in the ratio $1: 3$
3. $A(2,5,3)$ and $C(5,-1,9)$ split in the ratio $2: 1$
4. $\quad A(3,1,7)$ and $C(8,11,12)$ split in the ratio $2: 3$
5. $\quad A(6,4,1)$ and $C(-4,19,6)$ split in the ratio $1: 4$
6. $\quad A(-3,2,3)$ and $C(-6,-4,-6)$ split in the ratio $1: 2$
7. $\quad A(7,-2,3)$ and $C(2,13,18)$ split in the ratio $2: 3$
8. $A(2,5,-10)$ and $C(-5,12,4)$ split in the ratio $5: 2$
9. $A(-1,-3,-5)$ and $C(3,1,3)$ split in the ratio $3: 1$
10. $A(-4,-2,4)$ and $C(2,1,7)$ split in the ratio $2: 1$

## APPLYING QUESTION



P splits $\overrightarrow{A C}$ in the ratio $5: 2$
Calculate the value of $k$ and find the coordinates of $P$.

