

Start: $A=(4, -3); B=(5, -1);$
 $C=(-1, -2)$
 equation of line l :
 $r = \begin{pmatrix} 1 \\ 2 \end{pmatrix} + s \begin{pmatrix} 3 \\ 4 \end{pmatrix}$

Find an equation of the line passing through the point A parallel to BC

$$r = \begin{pmatrix} -1 \\ -2 \end{pmatrix} + t \begin{pmatrix} -2 \\ 1 \end{pmatrix}$$

Find an equation of the line passing through the points A and B

$$r = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + t \begin{pmatrix} 6 \\ 1 \end{pmatrix}$$

Find an equation of the line passing through the point A perpendicular to BC

$$r = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + t \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$

Find an equation of the line passing through the points A and C

$$r = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + t \begin{pmatrix} 1 \\ -6 \end{pmatrix}$$

Find an equation of the line passing through the point B parallel to AC

$$r = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + t \begin{pmatrix} -5 \\ 1 \end{pmatrix}$$

Find an equation of the line passing through the points B and C

$$r = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + t \begin{pmatrix} -5 \\ 1 \end{pmatrix}$$

Find an equation of the line passing through the point B perpendicular to AC

$$r = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + t \begin{pmatrix} 6 \\ 1 \end{pmatrix}$$

$ABDC$ is a parallelogram.
Find the position vector of D .

$$r = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + t \begin{pmatrix} 1 \\ 5 \end{pmatrix}$$

Find an equation of the line passing through the point C parallel to AB

$$\begin{pmatrix} 0 \\ 0 \end{pmatrix}$$

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$ACBD$ is a parallelogram.
Find the position vector of D .

$$\begin{pmatrix} -2 \\ -4 \end{pmatrix}$$

The point $\begin{pmatrix} 7 \\ 10 \end{pmatrix}$ lies on the line l
when $s =$

$$\underline{r} = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + t \begin{pmatrix} 1 \\ -6 \end{pmatrix}$$

Find an equation of the line passing through the
point B parallel to the line $\underline{r} = \begin{pmatrix} 2 \\ 3 \end{pmatrix} + m \begin{pmatrix} 4 \\ 5 \end{pmatrix}$

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The point $\begin{pmatrix} -2 \\ -2 \end{pmatrix}$ lies on the line l
when $s =$

$$\underline{r} = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + m \begin{pmatrix} 4 \\ 5 \end{pmatrix}$$

Find an equation of the line passing through the
point C parallel to the line $\underline{r} = \begin{pmatrix} 1 \\ 4 \end{pmatrix} + m \begin{pmatrix} 2 \\ 3 \end{pmatrix}$

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The point $\begin{pmatrix} -8 \\ -10 \end{pmatrix}$ lies on the line l
when $s =$

$$\underline{r} = \begin{pmatrix} -1 \\ -2 \end{pmatrix} + m \begin{pmatrix} 2 \\ 3 \end{pmatrix}$$

Find an equation of the line passing through the
point A parallel to the line $\underline{r} = \begin{pmatrix} 2 \\ 3 \end{pmatrix} + m \begin{pmatrix} 4 \\ 5 \end{pmatrix}$

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Find an equation of the
line passing through the
point A perpendicular to AC

$$\underline{r} = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + m \begin{pmatrix} 4 \\ 5 \end{pmatrix}$$

Find an equation of the line passing through the
point B perpendicular to the line $\underline{r} = \begin{pmatrix} 2 \\ 3 \end{pmatrix} + m \begin{pmatrix} 4 \\ 5 \end{pmatrix}$

$$\underline{r} = \begin{pmatrix} 4 \\ -3 \end{pmatrix} + t \begin{pmatrix} 1 \\ 5 \end{pmatrix}$$

Find an equation of the
line passing through the
point C perpendicular to AC

$$\underline{r} = \begin{pmatrix} 5 \\ -1 \end{pmatrix} + m \begin{pmatrix} -5 \\ 4 \end{pmatrix}$$

Find an equation of the line passing through the
point A perpendicular to the line $\underline{r} = \begin{pmatrix} 2 \\ 3 \end{pmatrix} + m \begin{pmatrix} 3 \\ -2 \end{pmatrix}$