Student Name: \_

Score:

## **Multiplication of matrices**

Sheet 6

Find the product of the following matrices:

$$\begin{bmatrix} 10 & 11 & -5 \\ 8 & -3 & 9 \\ -2 & -3 & 6 \end{bmatrix} \begin{bmatrix} 2 \\ -3 \\ -1 \end{bmatrix} =$$

$$\begin{bmatrix} 6 & 7 & -8 \\ -2 & 5 & 3 \end{bmatrix} \begin{bmatrix} 4 & 7 \\ 9 & -2 \\ -5 & -5 \end{bmatrix} =$$

## $\begin{bmatrix} 3 & 7 \\ 2 & 3 \\ -5 & 20 \end{bmatrix} \begin{bmatrix} -3 & 4 & 6 \\ 8 & -9 & 2 \end{bmatrix} =$

$$\begin{bmatrix} 1 & 14 \\ 3 & 5 \end{bmatrix} \begin{bmatrix} -2 \\ 13 \end{bmatrix} =$$

## $\begin{bmatrix} 6 & 7 & -8 \\ -2 & 5 & 3 \end{bmatrix} \begin{bmatrix} 4 & 7 \\ 9 & -2 \\ -5 & -5 \end{bmatrix} =$ **PREVIEW**

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$$\begin{bmatrix} 3 & 3 & 2 \\ 6 & -1 & 1 \\ -2 & 5 & 2 \end{bmatrix} \begin{bmatrix} 6 \\ -4 \\ 7 \end{bmatrix} =$$

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**Answer key** 

**Multiplication of matrices** 

Sheet 6

$$\begin{bmatrix} 10 & 11 & -5 \\ 8 & -3 & 9 \\ -2 & -3 & 6 \end{bmatrix} \begin{bmatrix} 2 \\ -3 \\ -1 \end{bmatrix} = \begin{bmatrix} -8 \\ 16 \\ -1 \end{bmatrix}$$

$$\begin{bmatrix} 6 & 7 & -8 \\ -2 & 5 & 3 \end{bmatrix} \begin{bmatrix} 4 & 7 \\ 9 & -2 \\ -5 & -5 \end{bmatrix} = \begin{bmatrix} 4 & 7 \\ -5 & -5 \end{bmatrix}$$

## $\begin{bmatrix} 6 & 7 & -8 \\ -2 & 5 & 3 \end{bmatrix} \begin{bmatrix} 4 & 7 \\ 9 & -2 \\ -5 & -5 \end{bmatrix} = \begin{bmatrix} \mathbf{PREVIEW} \end{bmatrix}$

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 $\begin{bmatrix} 3 & 7 \\ 2 & 3 \\ -5 & 20 \end{bmatrix} \begin{bmatrix} -3 & 4 & 6 \\ 8 & -9 & 2 \end{bmatrix} =$ 

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 $\begin{bmatrix} 1 & 14 \\ 3 & 5 \end{bmatrix} \begin{bmatrix} -2 \\ 13 \end{bmatrix} = \begin{bmatrix} 180 \\ 59 \end{bmatrix}$ 

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$$\begin{bmatrix} 3 & 3 & 2 \\ 6 & -1 & 1 \\ -2 & 5 & 2 \end{bmatrix} \begin{bmatrix} 6 \\ -4 \\ 7 \end{bmatrix} = \begin{bmatrix} 20 \\ 47 \\ -18 \end{bmatrix}$$