



Expand each problem using the box method.

1)  $(5x^2+1x-7)(1x^2-2x+9)$

2)  $(1x^2-9x)(1x^2+2x)$

3)  $(-4x^2-8x)(9x^2+6x-6)$

4)  $(-6x^2-1x)(8x^2+3x+1)$

5)  $(-4x^2-9x+8)(-4x^2-9x-6)$

6)  $(-4x^2-8x)(7x^2-3x+7)$

7)  $(-9x^2-6x+3)(-4x^2-4x)$

8)  $(-8x^2+4x)(8x^2+8x)$

9)  $(5x^2-9x+5)(-2x^2+5x)$

10)  $(-2x^2-8x)(4x^2+3x)$

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Expand each problem using the box method.

1)  $(5x^2+1x-7)(1x^2-2x+9)$

|        |          |         |         |
|--------|----------|---------|---------|
|        | $5x^2$   | $1x$    | $-7$    |
| $1x^2$ | $5x^4$   | $1x^3$  | $-7x^2$ |
| $-2x$  | $-10x^3$ | $-2x^2$ | $14x$   |
| $9$    | $45x^2$  | $9x$    | $-63$   |

2)  $(1x^2+-9x)(1x^2+2x)$

|        |        |          |
|--------|--------|----------|
|        | $1x^2$ | $-9x$    |
| $1x^2$ | $1x^4$ | $-9x^3$  |
| $2x$   | $2x^3$ | $-18x^2$ |

3)  $(-4x^2+-8x)(9x^2+6x+-6)$

|        |          |          |
|--------|----------|----------|
|        | $-4x^2$  | $-8x$    |
| $9x^2$ | $-36x^4$ | $-72x^3$ |
| $6x$   | $-24x^3$ | $-48x^2$ |
| $-6$   | $24x^2$  | $48x$    |

4)  $(-6x^2+-1x)(8x^2+3x+1)$

|        |          |         |
|--------|----------|---------|
|        | $-6x^2$  | $-1x$   |
| $8x^2$ | $-48x^4$ | $-8x^3$ |
| $3x$   | $-18x^3$ | $-3x^2$ |
| $1$    | $-6x^2$  | $-1x$   |

5)  $(-4x^2+-9x+8)(-4x^2+-9x+-6)$

|         |         |         |          |
|---------|---------|---------|----------|
|         | $-4x^2$ | $-9x$   | $8$      |
| $-4x^2$ | $16x^4$ | $36x^3$ | $-32x^2$ |
| $-9x$   | $36x^3$ | $81x^2$ | $-72x$   |
| $-6$    | $24x^2$ | $54x$   | $-48$    |

6)  $(-4x^2+-8x)(7x^2+-3x+7)$

|        |          |          |
|--------|----------|----------|
|        | $-4x^2$  | $-8x$    |
| $7x^2$ | $-28x^4$ | $-56x^3$ |
| $-3x$  | $12x^3$  | $24x^2$  |
| $7$    | $-28x^2$ | $-56x$   |

7)  $(-9x^2+-6x+3)(-4x^2+-4x)$

|         |         |         |          |
|---------|---------|---------|----------|
|         | $-9x^2$ | $-6x$   | $3$      |
| $-4x^2$ | $36x^4$ | $24x^3$ | $-12x^2$ |
| $-4x$   | $36x^3$ | $24x^2$ | $-12x$   |

8)  $(-8x^2+4x)(8x^2+8x)$

|        |          |         |
|--------|----------|---------|
|        | $-8x^2$  | $4x$    |
| $8x^2$ | $-64x^4$ | $32x^3$ |
| $8x$   | $-64x^3$ | $32x^2$ |

9)  $(5x^2+-9x+5)(-2x^2+5x)$

|         |          |          |          |
|---------|----------|----------|----------|
|         | $5x^2$   | $-9x$    | $5$      |
| $-2x^2$ | $-10x^4$ | $18x^3$  | $-10x^2$ |
| $5x$    | $25x^3$  | $-45x^2$ | $25x$    |

10)  $(-2x^2+-8x)(4x^2+3x)$

|        |         |          |
|--------|---------|----------|
|        | $-2x^2$ | $-8x$    |
| $4x^2$ | $-8x^4$ | $-32x^3$ |
| $3x$   | $-6x^3$ | $-24x^2$ |

**Answers**

1.  $5x^4-9x^3+36x^2+23x-63$

2.  $x^4-7x^3-18x^2$

3.  $-36x^4-96x^3-24x^2+48x$

4.  $-48x^4-26x^3-9x^2-1x$

5.  $16x^4+72x^3+73x^2-18x-48$

6.  $-28x^4-44x^3-4x^2-56x$

7.  $36x^4+60x^3+12x^2-12x$

8.  $-64x^4-32x^3+32x^2$

9.  $-10x^4+43x^3-55x^2+25x$

10.  $-8x^4-38x^3-24x^2$