



Expand each problem using the box method.

1) $(-5x^2 + -1x + 4)(-6x^2 + -1x)$

2) $(-9x^2 + 9x)(-1x^2 + 9x + -4)$

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

4) $(5x^2 + -6x + -3)(-4x^2 + -2x)$

5) $(8x^2 + -7x + 9)(-4x^2 + 6x)$

6) $(-8x^2 + -9x)(-1x^2 + 8x)$

7) $(5x^2 + -5x + -4)(-8x^2 + 7x + -3)$

8) $(-6x^2 + -8x)(-5x^2 + -3x)$

9) $(6x^2 + -5x + 2)(5x^2 + -9x + 3)$

10) $(8x^2 + -6x + 9)(7x^2 + 3x)$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Expand each problem using the box method.

1) $(-5x^2 + -1x + 4)(-6x^2 + -1x)$

| | | | |
|---------------------------|---------------------------|-------------------------|-----------------------|
| | $-5x^2$ | $-1x$ | 4 |
| $-6x^2$ | $30x^4$ | $6x^3$ | $-24x^2$ |
| $-1x$ | $5x^3$ | $1x^2$ | $-4x$ |

2) $(-9x^2 + 9x)(-1x^2 + 9x + -4)$

| | | |
|---------------------------|---------------------------|------------------------|
| | $-9x^2$ | $9x$ |
| $-1x^2$ | $9x^4$ | $-9x^3$ |
| $9x$ | $-81x^3$ | $81x^2$ |
| -4 | $36x^2$ | $-36x$ |

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

| | | | |
|---------------------------|--------------------------|------------------------|------------------------|
| | $9x^2$ | $3x$ | -3 |
| $-4x^2$ | $-36x^4$ | $-12x^3$ | $12x^2$ |
| $6x$ | $54x^3$ | $18x^2$ | $-18x$ |
| -2 | $-18x^2$ | $-6x$ | 6 |

4) $(5x^2 + -6x + -3)(-4x^2 + -2x)$

| | | | |
|---------------------------|--------------------------|-------------------------|------------------------|
| | $5x^2$ | $-6x$ | -3 |
| $-4x^2$ | $-20x^4$ | $24x^3$ | $12x^2$ |
| $-2x$ | $-10x^3$ | $12x^2$ | $6x$ |

5) $(8x^2 + -7x + 9)(-4x^2 + 6x)$

| | | | |
|---------------------------|--------------------------|-------------------------|-----------------------|
| | $8x^2$ | $-7x$ | 9 |
| $-4x^2$ | $-32x^4$ | $28x^3$ | $-36x^2$ |
| $6x$ | $48x^3$ | $-42x^2$ | $54x$ |

6) $(-8x^2 + -9x)(-1x^2 + 8x)$

| | | |
|---------------------------|---------------------------|-------------------------|
| | $-8x^2$ | $-9x$ |
| $-1x^2$ | $8x^4$ | $9x^3$ |
| $8x$ | $-64x^3$ | $-72x^2$ |

7) $(5x^2 + -5x + -4)(-8x^2 + 7x + -3)$

| | | | |
|---------------------------|--------------------------|-------------------------|------------------------|
| | $5x^2$ | $-5x$ | -4 |
| $-8x^2$ | $-40x^4$ | $40x^3$ | $32x^2$ |
| $7x$ | $35x^3$ | $-35x^2$ | $-28x$ |
| -3 | $-15x^2$ | $15x$ | 12 |

8) $(-6x^2 + -8x)(-5x^2 + -3x)$

| | | |
|---------------------------|---------------------------|-------------------------|
| | $-6x^2$ | $-8x$ |
| $-5x^2$ | $30x^4$ | $40x^3$ |
| $-3x$ | $18x^3$ | $24x^2$ |

9) $(6x^2 + -5x + 2)(5x^2 + -9x + 3)$

| | | | |
|--------------------------|--------------------------|-------------------------|-----------------------|
| | $6x^2$ | $-5x$ | 2 |
| $5x^2$ | $30x^4$ | $-25x^3$ | $10x^2$ |
| $-9x$ | $-54x^3$ | $45x^2$ | $-18x$ |
| 3 | $18x^2$ | $-15x$ | 6 |

10) $(8x^2 + -6x + 9)(7x^2 + 3x)$

| | | | |
|--------------------------|--------------------------|-------------------------|-----------------------|
| | $8x^2$ | $-6x$ | 9 |
| $7x^2$ | $56x^4$ | $-42x^3$ | $63x^2$ |
| $3x$ | $24x^3$ | $-18x^2$ | $27x$ |

Answers

1. $30x^4 + 11x^3 - 23x^2 - 4x$

2. $9x^4 - 90x^3 + 117x^2 - 36x$

3. $-36x^4 + 42x^3 + 12x^2 - 24x + 6$

4. $-20x^4 + 14x^3 + 24x^2 + 6x$

5. $-32x^4 + 76x^3 - 78x^2 + 54x$

6. $8x^4 - 55x^3 - 72x^2$

7. $-40x^4 + 75x^3 - 18x^2 - 13x + 12$

8. $30x^4 + 58x^3 + 24x^2$

9. $30x^4 - 79x^3 + 73x^2 - 33x + 6$

10. $56x^4 - 18x^3 + 45x^2 + 27x$