



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. \_\_\_\_\_

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



Expand each problem using the box method.

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

	<b><math>-5x^2</math></b>	<b><math>-1x</math></b>	<b><math>4</math></b>
<b><math>-6x^2</math></b>	$30x^4$	$6x^3$	$-24x^2$
<b><math>-1x</math></b>	$5x^3$	$1x^2$	$-4x$

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

	<b><math>-9x^2</math></b>	<b><math>9x</math></b>
<b><math>-1x^2</math></b>	$9x^4$	$-9x^3$
<b><math>9x</math></b>	$-81x^3$	$81x^2$
<b><math>-4</math></b>	$36x^2$	$-36x$

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

	<b><math>9x^2</math></b>	<b><math>3x</math></b>	<b><math>-3</math></b>
<b><math>-4x^2</math></b>	$-36x^4$	$-12x^3$	$12x^2$
<b><math>6x</math></b>	$54x^3$	$18x^2$	$-18x$
<b><math>-2</math></b>	$-18x^2$	$-6x$	$6$

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

	<b><math>5x^2</math></b>	<b><math>-6x</math></b>	<b><math>-3</math></b>
<b><math>-4x^2</math></b>	$-20x^4$	$24x^3$	$12x^2$
<b><math>-2x</math></b>	$-10x^3$	$12x^2$	$6x$

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

	<b><math>8x^2</math></b>	<b><math>-7x</math></b>	<b><math>9</math></b>
<b><math>-4x^2</math></b>	$-32x^4$	$28x^3$	$-36x^2$
<b><math>6x</math></b>	$48x^3$	$-42x^2$	$54x$

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

	<b><math>-8x^2</math></b>	<b><math>-9x</math></b>
<b><math>-1x^2</math></b>	$8x^4$	$9x^3$
<b><math>8x</math></b>	$-64x^3$	$-72x^2$

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

	<b><math>5x^2</math></b>	<b><math>-5x</math></b>	<b><math>-4</math></b>
<b><math>-8x^2</math></b>	$-40x^4$	$40x^3$	$32x^2$
<b><math>7x</math></b>	$35x^3$	$-35x^2$	$-28x$
<b><math>-3</math></b>	$-15x^2$	$15x$	$12$

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

	<b><math>-6x^2</math></b>	<b><math>-8x</math></b>
<b><math>-5x^2</math></b>	$30x^4$	$40x^3$
<b><math>-3x</math></b>	$18x^3$	$24x^2$

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

	<b><math>6x^2</math></b>	<b><math>-5x</math></b>	<b><math>2</math></b>
<b><math>5x^2</math></b>	$30x^4$	$-25x^3$	$10x^2$
<b><math>-9x</math></b>	$-54x^3$	$45x^2$	$-18x$
<b><math>3</math></b>	$18x^2$	$-15x$	$6$

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

	<b><math>8x^2</math></b>	<b><math>-6x</math></b>	<b><math>9</math></b>
<b><math>7x^2</math></b>	$56x^4$	$-42x^3$	$63x^2$
<b><math>3x</math></b>	$24x^3$	$-18x^2$	$27x$

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



Expand each problem using the box method.

1)  $(-5x^2+9x+4)(-3x^2+7x+1)$

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

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

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

5)  $(-3x^2+-1x+-1)(8x^2+-2x+3)$

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

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

8)  $(-3x^2+9x+-5)(-5x^2+-7x+1)$

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

10)  $(2x^2+-3x+-8)(-4x^2+5x)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

1)  $(-5x^2+9x+4)(-3x^2+7x+1)$

	$-5x^2$	$9x$	$4$
$-3x^2$	$15x^4$	$-27x^3$	$-12x^2$
$7x$	$-35x^3$	$63x^2$	$28x$
$1$	$-5x^2$	$9x$	$4$

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

	$-9x^2$	$-2x$	$-7$
$-9x^2$	$81x^4$	$18x^3$	$63x^2$
$5x$	$-45x^3$	$-10x^2$	$-35x$
$8$	$-72x^2$	$-16x$	$-56$

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

	$-8x^2$	$7x$	$7$
$-6x^2$	$48x^4$	$-42x^3$	$-42x^2$
$7x$	$-56x^3$	$49x^2$	$49x$

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

	$9x^2$	$4x$
$-6x^2$	$-54x^4$	$-24x^3$
$-6x$	$-54x^3$	$-24x^2$
$-2$	$-18x^2$	$-8x$

5)  $(-3x^2+-1x+-1)(8x^2+-2x+3)$

	$-3x^2$	$-1x$	$-1$
$8x^2$	$-24x^4$	$-8x^3$	$-8x^2$
$-2x$	$6x^3$	$2x^2$	$2x$
$3$	$-9x^2$	$-3x$	$-3$

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

	$3x^2$	$9x$	$-9$
$-2x^2$	$-6x^4$	$-18x^3$	$18x^2$
$-4x$	$-12x^3$	$-36x^2$	$36x$
$9$	$27x^2$	$81x$	$-81$

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

	$1x^2$	$-7x$	$-1$
$1x^2$	$1x^4$	$-7x^3$	$-1x^2$
$-9x$	$-9x^3$	$63x^2$	$9x$

8)  $(-3x^2+9x+-5)(-5x^2+-7x+1)$

	$-3x^2$	$9x$	$-5$
$-5x^2$	$15x^4$	$-45x^3$	$25x^2$
$-7x$	$21x^3$	$-63x^2$	$35x$
$1$	$-3x^2$	$9x$	$-5$

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

	$7x^2$	$-6x$
$-9x^2$	$-63x^4$	$54x^3$
$-2x$	$-14x^3$	$12x^2$

10)  $(2x^2+-3x+-8)(-4x^2+5x)$

	$2x^2$	$-3x$	$-8$
$-4x^2$	$-8x^4$	$12x^3$	$32x^2$
$5x$	$10x^3$	$-15x^2$	$-40x$

Answers

1.  $15x^4-62x^3+46x^2+37x+4$

2.  $81x^4-27x^3-19x^2-51x-56$

3.  $48x^4-98x^3+7x^2+49x$

4.  $-54x^4-78x^3-42x^2-8x$

5.  $-24x^4-2x^3-15x^2-1x-3$

6.  $-6x^4-30x^3+9x^2+117x-81$

7.  $x^4-16x^3+62x^2+9x$

8.  $15x^4-24x^3-41x^2+44x-5$

9.  $-63x^4+40x^3+12x^2$

10.  $-8x^4+22x^3+17x^2-40x$



Expand each problem using the box method.

1)  $(-7x^2 + -3x)(3x^2 + 3x)$

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

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

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

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

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

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

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

9)  $(-8x^2 + 6x + -2)(7x^2 + 1x + -2)$

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

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

1)  $(-7x^2 + -3x)(3x^2 + 3x)$

	$-7x^2$	$-3x$
$3x^2$	$-21x^4$	$-9x^3$
$3x$	$-21x^3$	$-9x^2$

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

	$6x^2$	$9x$	$-9$
$-3x^2$	$-18x^4$	$-27x^3$	$27x^2$
$6x$	$36x^3$	$54x^2$	$-54x$

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

	$-7x^2$	$-9x$	$2$
$6x^2$	$-42x^4$	$-54x^3$	$12x^2$
$9x$	$-63x^3$	$-81x^2$	$18x$
$-4$	$28x^2$	$36x$	$-8$

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

	$-9x^2$	$-8x$
$2x^2$	$-18x^4$	$-16x^3$
$2x$	$-18x^3$	$-16x^2$

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

	$4x^2$	$8x$
$-7x^2$	$-28x^4$	$-56x^3$
$-6x$	$-24x^3$	$-48x^2$

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

	$-8x^2$	$4x$	$4$
$7x^2$	$-56x^4$	$28x^3$	$28x^2$
$5x$	$-40x^3$	$20x^2$	$20x$

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

	$5x^2$	$2x$	$3$
$-8x^2$	$-40x^4$	$-16x^3$	$-24x^2$
$4x$	$20x^3$	$8x^2$	$12x$

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

	$5x^2$	$-6x$
$-3x^2$	$-15x^4$	$18x^3$
$2x$	$10x^3$	$-12x^2$

9)  $(-8x^2 + 6x + -2)(7x^2 + 1x + -2)$

	$-8x^2$	$6x$	$-2$
$7x^2$	$-56x^4$	$42x^3$	$-14x^2$
$1x$	$-8x^3$	$6x^2$	$-2x$
$-2$	$16x^2$	$-12x$	$4$

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

	$-9x^2$	$3x$	$-7$
$-8x^2$	$72x^4$	$-24x^3$	$56x^2$
$8x$	$-72x^3$	$24x^2$	$-56x$

Answers

1.  $-21x^4 - 30x^3 - 9x^2$

2.  $-18x^4 + 9x^3 + 81x^2 - 54x$

3.  $-42x^4 - 117x^3 - 41x^2 + 54x - 8$

4.  $-18x^4 - 34x^3 - 16x^2$

5.  $-28x^4 - 80x^3 - 48x^2$

6.  $-56x^4 - 12x^3 + 48x^2 + 20x$

7.  $-40x^4 + 4x^3 - 16x^2 + 12x$

8.  $-15x^4 + 28x^3 - 12x^2$

9.  $-56x^4 + 34x^3 + 8x^2 - 14x + 4$

10.  $72x^4 - 96x^3 + 80x^2 - 56x$



Expand each problem using the box method.

1)  $(1x^2+7x)(-2x^2+-8x)$

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

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

4)  $(9x^2+8x)(-1x^2+8x+-1)$

5)  $(-3x^2+3x+-7)(-6x^2+8x+2)$

6)  $(7x^2+-3x+-2)(9x^2+1x)$

7)  $(-6x^2+-6x)(-8x^2+-2x+-1)$

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

9)  $(-6x^2+-5x)(-9x^2+1x+8)$

10)  $(-1x^2+6x+4)(8x^2+9x+8)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

1)  $(1x^2+7x)(-2x^2+-8x)$

	$1x^2$	$7x$
$-2x^2$	$-2x^4$	$-14x^3$
$-8x$	$-8x^3$	$-56x^2$

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

	$5x^2$	$4x$
$8x^2$	$40x^4$	$32x^3$
$-6x$	$-30x^3$	$-24x^2$

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

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

4)  $(9x^2+8x)(-1x^2+8x+-1)$

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

5)  $(-3x^2+3x+-7)(-6x^2+8x+2)$

	$-3x^2$	$3x$	$-7$
$-6x^2$	$18x^4$	$-18x^3$	$42x^2$
$8x$	$-24x^3$	$24x^2$	$-56x$
$2$	$-6x^2$	$6x$	$-14$

6)  $(7x^2+-3x+-2)(9x^2+1x)$

	$7x^2$	$-3x$	$-2$
$9x^2$	$63x^4$	$-27x^3$	$-18x^2$
$1x$	$7x^3$	$-3x^2$	$-2x$

7)  $(-6x^2+-6x)(-8x^2+-2x+-1)$

	$-6x^2$	$-6x$
$-8x^2$	$48x^4$	$48x^3$
$-2x$	$12x^3$	$12x^2$
$-1$	$6x^2$	$6x$

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

	$7x^2$	$-9x$	$-8$
$2x^2$	$14x^4$	$-18x^3$	$-16x^2$
$4x$	$28x^3$	$-36x^2$	$-32x$

9)  $(-6x^2+-5x)(-9x^2+1x+8)$

	$-6x^2$	$-5x$
$-9x^2$	$54x^4$	$45x^3$
$1x$	$-6x^3$	$-5x^2$
$8$	$-48x^2$	$-40x$

10)  $(-1x^2+6x+4)(8x^2+9x+8)$

	$-1x^2$	$6x$	$4$
$8x^2$	$-8x^4$	$48x^3$	$32x^2$
$9x$	$-9x^3$	$54x^2$	$36x$
$8$	$-8x^2$	$48x$	$32$

Answers

1.  $-2x^4 - 22x^3 - 56x^2$

2.  $40x^4 + 2x^3 - 24x^2$

3.  $-48x^4 + 24x^3 + 192x^2 - 72x$

4.  $-9x^4 + 64x^3 + 55x^2 - 8x$

5.  $18x^4 - 42x^3 + 60x^2 - 50x - 14$

6.  $63x^4 - 20x^3 - 21x^2 - 2x$

7.  $48x^4 + 60x^3 + 18x^2 + 6x$

8.  $14x^4 + 10x^3 - 52x^2 - 32x$

9.  $54x^4 + 39x^3 - 53x^2 - 40x$

10.  $-8x^4 + 39x^3 + 78x^2 + 84x + 32$





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



Expand each problem using the box method.

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

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

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

4)  $(-4x^2 + 3x)(8x^2 + -5x + 9)$

5)  $(-1x^2 + -2x)(-1x^2 + 8x + 6)$

6)  $(1x^2 + -2x)(-4x^2 + -7x)$

7)  $(2x^2 + 7x + -1)(1x^2 + -2x + -4)$

8)  $(-7x^2 + -4x + -3)(1x^2 + 8x + -7)$

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

10)  $(4x^2 + -7x + -3)(6x^2 + 7x + -8)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

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

	$-1x^2$	$-1x$
$-7x^2$	$7x^4$	$7x^3$
$2x$	$-2x^3$	$-2x^2$
$-5$	$5x^2$	$5x$

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

	$-7x^2$	$-2x$	$-4$
$5x^2$	$-35x^4$	$-10x^3$	$-20x^2$
$-9x$	$63x^3$	$18x^2$	$36x$

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

	$-8x^2$	$-5x$
$-8x^2$	$64x^4$	$40x^3$
$8x$	$-64x^3$	$-40x^2$
$4$	$-32x^2$	$-20x$

4)  $(-4x^2 + 3x)(8x^2 + -5x + 9)$

	$-4x^2$	$3x$
$8x^2$	$-32x^4$	$24x^3$
$-5x$	$20x^3$	$-15x^2$
$9$	$-36x^2$	$27x$

5)  $(-1x^2 + -2x)(-1x^2 + 8x + 6)$

	$-1x^2$	$-2x$
$-1x^2$	$1x^4$	$2x^3$
$8x$	$-8x^3$	$-16x^2$
$6$	$-6x^2$	$-12x$

6)  $(1x^2 + -2x)(-4x^2 + -7x)$

	$1x^2$	$-2x$
$-4x^2$	$-4x^4$	$8x^3$
$-7x$	$-7x^3$	$14x^2$

7)  $(2x^2 + 7x + -1)(1x^2 + -2x + -4)$

	$2x^2$	$7x$	$-1$
$1x^2$	$2x^4$	$7x^3$	$-1x^2$
$-2x$	$-4x^3$	$-14x^2$	$2x$
$-4$	$-8x^2$	$-28x$	$4$

8)  $(-7x^2 + -4x + -3)(1x^2 + 8x + -7)$

	$-7x^2$	$-4x$	$-3$
$1x^2$	$-7x^4$	$-4x^3$	$-3x^2$
$8x$	$-56x^3$	$-32x^2$	$-24x$
$-7$	$49x^2$	$28x$	$21$

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

	$-9x^2$	$4x$
$-4x^2$	$36x^4$	$-16x^3$
$-5x$	$45x^3$	$-20x^2$

10)  $(4x^2 + -7x + -3)(6x^2 + 7x + -8)$

	$4x^2$	$-7x$	$-3$
$6x^2$	$24x^4$	$-42x^3$	$-18x^2$
$7x$	$28x^3$	$-49x^2$	$-21x$
$-8$	$-32x^2$	$56x$	$24$

Answers

1.  $7x^4 + 5x^3 + 3x^2 + 5x$

2.  $-35x^4 + 53x^3 - 2x^2 + 36x$

3.  $64x^4 - 24x^3 - 72x^2 - 20x$

4.  $-32x^4 + 44x^3 - 51x^2 + 27x$

5.  $x^4 - 6x^3 - 22x^2 - 12x$

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

7.  $2x^4 + 3x^3 - 23x^2 - 26x + 4$

8.  $-7x^4 - 60x^3 + 14x^2 + 4x + 21$

9.  $36x^4 + 29x^3 - 20x^2$

10.  $24x^4 - 14x^3 - 99x^2 + 35x + 24$



Expand each problem using the box method.

1)  $(8x^2+8x+3)(-7x^2+2x)$

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

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

4)  $(-1x^2+-3x+5)(-8x^2+-4x)$

5)  $(-9x^2+-3x)(8x^2+-4x+-7)$

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

7)  $(-9x^2+6x+5)(1x^2+-3x)$

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

9)  $(3x^2+-1x+-9)(-9x^2+-3x)$

10)  $(-8x^2+6x)(-2x^2+-5x)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

1)  $(8x^2+8x+3)(-7x^2+2x)$

	$8x^2$	$8x$	$-3$
$-7x^2$	$-56x^4$	$-56x^3$	$21x^2$
$2x$	$16x^3$	$16x^2$	$-6x$

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

	$2x^2$	$4x$
$-7x^2$	$-14x^4$	$-28x^3$
$9x$	$18x^3$	$36x^2$

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

	$-2x^2$	$6x$	$3$
$-2x^2$	$4x^4$	$-12x^3$	$-6x^2$
$7x$	$-14x^3$	$42x^2$	$21x$

4)  $(-1x^2+-3x+5)(-8x^2+-4x)$

	$-1x^2$	$-3x$	$5$
$-8x^2$	$8x^4$	$24x^3$	$-40x^2$
$-4x$	$4x^3$	$12x^2$	$-20x$

5)  $(-9x^2+-3x)(8x^2+-4x+-7)$

	$-9x^2$	$-3x$
$8x^2$	$-72x^4$	$-24x^3$
$-4x$	$36x^3$	$12x^2$
$-7$	$63x^2$	$21x$

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

	$3x^2$	$6x$
$4x^2$	$12x^4$	$24x^3$
$-6x$	$-18x^3$	$-36x^2$
$8$	$24x^2$	$48x$

7)  $(-9x^2+6x+5)(1x^2+-3x)$

	$-9x^2$	$6x$	$5$
$1x^2$	$-9x^4$	$6x^3$	$5x^2$
$-3x$	$27x^3$	$-18x^2$	$-15x$

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

	$-8x^2$	$-6x$	$2$
$7x^2$	$-56x^4$	$-42x^3$	$14x^2$
$9x$	$-72x^3$	$-54x^2$	$18x$

9)  $(3x^2+-1x+-9)(-9x^2+-3x)$

	$3x^2$	$-1x$	$-9$
$-9x^2$	$-27x^4$	$9x^3$	$81x^2$
$-3x$	$-9x^3$	$3x^2$	$27x$

10)  $(-8x^2+6x)(-2x^2+-5x)$

	$-8x^2$	$6x$
$-2x^2$	$16x^4$	$-12x^3$
$-5x$	$40x^3$	$-30x^2$

**Answers**

1.  $-56x^4-40x^3+37x^2-6x$

2.  $-14x^4-10x^3+36x^2$

3.  $4x^4-26x^3+36x^2+21x$

4.  $8x^4+28x^3-28x^2-20x$

5.  $-72x^4+12x^3+75x^2+21x$

6.  $12x^4+6x^3-12x^2+48x$

7.  $-9x^4+33x^3-13x^2-15x$

8.  $-56x^4-114x^3-40x^2+18x$

9.  $-27x^4+0x^3+84x^2+27x$

10.  $16x^4+28x^3-30x^2$



Expand each problem using the box method.

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

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

3)  $(8x^2 + -9x)(5x^2 + -4x + 6)$

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

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

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

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

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

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

10)  $(-6x^2 + -5x)(8x^2 + 8x + -6)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

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

	<b><math>-4x^2</math></b>	<b><math>-1x</math></b>	<b><math>8</math></b>
<b><math>2x^2</math></b>	$-8x^4$	$-2x^3$	$16x^2$
<b><math>-8x</math></b>	$32x^3$	$8x^2$	$-64x$

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

	<b><math>2x^2</math></b>	<b><math>-4x</math></b>
<b><math>-7x^2</math></b>	$-14x^4$	$28x^3$
<b><math>3x</math></b>	$6x^3$	$-12x^2$
<b><math>8</math></b>	$16x^2$	$-32x$

3)  $(8x^2 + -9x)(5x^2 + -4x + 6)$

	<b><math>8x^2</math></b>	<b><math>-9x</math></b>
<b><math>5x^2</math></b>	$40x^4$	$-45x^3$
<b><math>-4x</math></b>	$-32x^3$	$36x^2$
<b><math>6</math></b>	$48x^2$	$-54x$

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

	<b><math>-6x^2</math></b>	<b><math>-3x</math></b>	<b><math>8</math></b>
<b><math>-6x^2</math></b>	$36x^4$	$18x^3$	$-48x^2$
<b><math>8x</math></b>	$-48x^3$	$-24x^2$	$64x$

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

	<b><math>2x^2</math></b>	<b><math>-6x</math></b>	<b><math>5</math></b>
<b><math>-5x^2</math></b>	$-10x^4$	$30x^3$	$-25x^2$
<b><math>-4x</math></b>	$-8x^3$	$24x^2$	$-20x$

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

	<b><math>-3x^2</math></b>	<b><math>8x</math></b>
<b><math>-7x^2</math></b>	$21x^4$	$-56x^3$
<b><math>6x</math></b>	$-18x^3$	$48x^2$

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

	<b><math>7x^2</math></b>	<b><math>8x</math></b>	<b><math>4</math></b>
<b><math>7x^2</math></b>	$49x^4$	$56x^3$	$28x^2$
<b><math>-5x</math></b>	$-35x^3$	$-40x^2$	$-20x$
<b><math>5</math></b>	$35x^2$	$40x$	$20$

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

	<b><math>4x^2</math></b>	<b><math>5x</math></b>	<b><math>-3</math></b>
<b><math>-4x^2</math></b>	$-16x^4$	$-20x^3$	$12x^2$
<b><math>3x</math></b>	$12x^3$	$15x^2$	$-9x$
<b><math>3</math></b>	$12x^2$	$15x$	$-9$

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

	<b><math>-8x^2</math></b>	<b><math>-3x</math></b>	<b><math>2</math></b>
<b><math>-9x^2</math></b>	$72x^4$	$27x^3$	$-18x^2$
<b><math>6x</math></b>	$-48x^3$	$-18x^2$	$12x$

10)  $(-6x^2 + -5x)(8x^2 + 8x + -6)$

	<b><math>-6x^2</math></b>	<b><math>-5x</math></b>
<b><math>8x^2</math></b>	$-48x^4$	$-40x^3$
<b><math>8x</math></b>	$-48x^3$	$-40x^2$
<b><math>-6</math></b>	$36x^2$	$30x$

Answers

1.  $-8x^4 + 30x^3 + 24x^2 - 64x$

2.  $-14x^4 + 34x^3 + 4x^2 - 32x$

3.  $40x^4 - 77x^3 + 84x^2 - 54x$

4.  $36x^4 - 30x^3 - 72x^2 + 64x$

5.  $-10x^4 + 22x^3 - 1x^2 - 20x$

6.  $21x^4 - 74x^3 + 48x^2$

7.  $49x^4 + 21x^3 + 23x^2 + 20x + 20$

8.  $-16x^4 - 8x^3 + 39x^2 + 6x - 9$

9.  $72x^4 - 21x^3 - 36x^2 + 12x$

10.  $-48x^4 - 88x^3 - 4x^2 + 30x$





Expand each problem using the box method.

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

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

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

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

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

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

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

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

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

10)  $(-1x^2 + 1x)(-1x^2 + -3x)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

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

	$1x^2$	$-2x$
$-6x^2$	$-6x^4$	$12x^3$
$3x$	$3x^3$	$-6x^2$

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

	$4x^2$	$-3x$	$2$
$-6x^2$	$-24x^4$	$18x^3$	$-12x^2$
$-4x$	$-16x^3$	$12x^2$	$-8x$

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

	$5x^2$	$5x$
$-4x^2$	$-20x^4$	$-20x^3$
$-4x$	$-20x^3$	$-20x^2$
$-6$	$-30x^2$	$-30x$

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

	$-8x^2$	$3x$	$8$
$-8x^2$	$64x^4$	$-24x^3$	$-64x^2$
$9x$	$-72x^3$	$27x^2$	$72x$

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

	$-5x^2$	$-7x$
$7x^2$	$-35x^4$	$-49x^3$
$1x$	$-5x^3$	$-7x^2$

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

	$7x^2$	$-6x$
$4x^2$	$28x^4$	$-24x^3$
$-5x$	$-35x^3$	$30x^2$

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

	$-5x^2$	$-5x$	$-7$
$-7x^2$	$35x^4$	$35x^3$	$49x^2$
$-2x$	$10x^3$	$10x^2$	$14x$

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

	$8x^2$	$-1x$
$-9x^2$	$-72x^4$	$9x^3$
$9x$	$72x^3$	$-9x^2$
$-2$	$-16x^2$	$2x$

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

	$-6x^2$	$2x$	$6$
$8x^2$	$-48x^4$	$16x^3$	$48x^2$
$-1x$	$6x^3$	$-2x^2$	$-6x$

10)  $(-1x^2 + 1x)(-1x^2 + -3x)$

	$-1x^2$	$1x$
$-1x^2$	$1x^4$	$-1x^3$
$-3x$	$3x^3$	$-3x^2$

Answers

1.  $-6x^4 + 15x^3 - 6x^2$

2.  $-24x^4 + 2x^3 - 8x$

3.  $-20x^4 - 40x^3 - 50x^2 - 30x$

4.  $64x^4 - 96x^3 - 37x^2 + 72x$

5.  $-35x^4 - 54x^3 - 7x^2$

6.  $28x^4 - 59x^3 + 30x^2$

7.  $35x^4 + 45x^3 + 59x^2 + 14x$

8.  $-72x^4 + 81x^3 - 25x^2 + 2x$

9.  $-48x^4 + 22x^3 + 46x^2 - 6x$

10.  $x^4 + 2x^3 - 3x^2$



Expand each problem using the box method.

1)  $(7x^2+6x)(3x^2+-7x+6)$

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

3)  $(-5x^2+-8x+-9)(-6x^2+-2x)$

4)  $(-8x^2+4x)(9x^2+7x+-3)$

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

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

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

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

9)  $(6x^2+1x+1)(-5x^2+-8x+6)$

10)  $(-9x^2+3x)(-3x^2+-4x+-1)$

**Answers**

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

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

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

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

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

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

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

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

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

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



Expand each problem using the box method.

1)  $(7x^2+6x)(3x^2+-7x+6)$

	$7x^2$	$6x$	
$3x^2$	$21x^4$	$18x^3$	
$-7x$	$-49x^3$	$-42x^2$	
$6$	$42x^2$	$36x$	

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

	$-7x^2$	$-6x$	$-7$
$-4x^2$	$28x^4$	$24x^3$	$28x^2$
$3x$	$-21x^3$	$-18x^2$	$-21x$

3)  $(-5x^2+-8x+-9)(-6x^2+-2x)$

	$-5x^2$	$-8x$	$-9$
$-6x^2$	$30x^4$	$48x^3$	$54x^2$
$-2x$	$10x^3$	$16x^2$	$18x$

4)  $(-8x^2+4x)(9x^2+7x+-3)$

	$-8x^2$	$4x$
$9x^2$	$-72x^4$	$36x^3$
$7x$	$-56x^3$	$28x^2$
$-3$	$24x^2$	$-12x$

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

	$-6x^2$	$5x$	$-4$
$-8x^2$	$48x^4$	$-40x^3$	$32x^2$
$-5x$	$30x^3$	$-25x^2$	$20x$

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

	$-8x^2$	$8x$	$-2$
$2x^2$	$-16x^4$	$16x^3$	$-4x^2$
$-2x$	$16x^3$	$-16x^2$	$4x$
$-2$	$16x^2$	$-16x$	$4$

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

	$2x^2$	$5x$	$7$
$-5x^2$	$-10x^4$	$-25x^3$	$-35x^2$
$2x$	$4x^3$	$10x^2$	$14x$

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

	$-9x^2$	$1x$	$8$
$-6x^2$	$54x^4$	$-6x^3$	$-48x^2$
$-8x$	$72x^3$	$-8x^2$	$-64x$

9)  $(6x^2+1x+1)(-5x^2+-8x+6)$

	$6x^2$	$1x$	$1$
$-5x^2$	$-30x^4$	$-5x^3$	$-5x^2$
$-8x$	$-48x^3$	$-8x^2$	$-8x$
$6$	$36x^2$	$6x$	$6$

10)  $(-9x^2+3x)(-3x^2+-4x+-1)$

	$-9x^2$	$3x$
$-3x^2$	$27x^4$	$-9x^3$
$-4x$	$36x^3$	$-12x^2$
$-1$	$9x^2$	$-3x$

**Answers**

1.  $21x^4-31x^3+36x$

2.  $28x^4+3x^3+10x^2-21x$

3.  $30x^4+58x^3+70x^2+18x$

4.  $-72x^4-20x^3+52x^2-12x$

5.  $48x^4-10x^3+7x^2+20x$

6.  $-16x^4+32x^3-4x^2-12x+4$

7.  $-10x^4-21x^3-25x^2+14x$

8.  $54x^4+66x^3-56x^2-64x$

9.  $-30x^4-53x^3+23x^2-2x+6$

10.  $27x^4+27x^3-3x^2-3x$