1. Perform polynomial long division to find the quotient and remainder.

$$-3x^2 - 4x + 1 \overline{)\ 15x^3 + 41x^2 + 23x - 9}$$

A. The quotient is $-5x - 7$ and the remainder is -2.

B. The quotient is $-5x + 7$ and the remainder is -10.

C. The quotient is $-5x + 7$ and the remainder is -11.

D. The quotient is $-5x - 7$ and the remainder is -10.

E. The quotient is $-5x - 7$ and the remainder is -7.

F. The quotient is $-5x + 7$ and the remainder is -2.

G. The quotient is $-5x + 7$ and the remainder is -7.

H. The quotient is $-5x - 7$ and the remainder is -11.

2. Perform polynomial long division to find the quotient and remainder.

$$-3x^2 + 4x + 9 \overline{)\ 27x^3 - 39x^2 - 77x + 11}$$

A. The quotient is $-9x + 1$ and the remainder is 2.

B. The quotient is $-9x - 1$ and the remainder is 2.

C. The quotient is $-9x - 1$ and the remainder is 10.

D. The quotient is $-9x + 1$ and the remainder is -2.

E. The quotient is $-9x - 1$ and the remainder is -3.

F. The quotient is $-9x - 1$ and the remainder is -2.

G. The quotient is $-9x + 1$ and the remainder is -3.

H. The quotient is $-9x + 1$ and the remainder is 10.

3. Perform polynomial long division to find the quotient and remainder.

$$-2x + 2 \enclose{longdiv}{\; -2x^2 - 12x + 19}$$

A. The quotient is $-1x + 7$ and the remainder is 14.

B. The quotient is $-1x + 7$ and the remainder is -2.

C. The quotient is $-1x + 7$ and the remainder is 9.

D. The quotient is $1x + 7$ and the remainder is 11.

E. The quotient is $-1x + 7$ and the remainder is 12.

F. The quotient is $1x + 7$ and the remainder is 8.

G. The quotient is $1x + 7$ and the remainder is 3.

H. The quotient is $1x + 7$ and the remainder is 5.

4. Perform polynomial long division to find the quotient and remainder.

$$8x - 3 \enclose{longdiv}{\; 24x^2 + 31x - 13}$$

A. The quotient is $3x + 5$ and the remainder is -1.

B. The quotient is $-3x + 5$ and the remainder is 11.

C. The quotient is $3x + 5$ and the remainder is 2.

D. The quotient is $-3x + 5$ and the remainder is -6.

E. The quotient is $3x + 5$ and the remainder is 1.

F. The quotient is $3x + 5$ and the remainder is 8.

G. The quotient is $-3x + 5$ and the remainder is 3.

H. The quotient is $-3x + 5$ and the remainder is 1.

5. Perform polynomial long division to find the quotient and remainder.

$$-9x + 4 \overline{)\ 45x^2 - 29x - 2}$$

A. The quotient is $-5x + 1$ and the remainder is -13.

B. The quotient is $5x + 1$ and the remainder is 13.

C. The quotient is $5x + 1$ and the remainder is -14.

D. The quotient is $5x + 1$ and the remainder is 1.

E. The quotient is $-5x + 1$ and the remainder is -6.

F. The quotient is $-5x + 1$ and the remainder is -4.

G. The quotient is $5x + 1$ and the remainder is 0.

H. The quotient is $-5x + 1$ and the remainder is -15.

6. Perform polynomial long division to find the quotient and remainder.

$$8x + 4 \overline{)\ -24x^3 - 44x^2 - 56x - 21}$$

A. The quotient is $-3x^2 - 4x - 5$ and the remainder is -2.

B. The quotient is $-3x^2 - 4x - 5$ and the remainder is -4.

C. The quotient is $-3x^2 + 4x - 5$ and the remainder is -2.

D. The quotient is $-3x^2 + 4x - 5$ and the remainder is -1.

E. The quotient is $-3x^2 - 4x - 5$ and the remainder is -5.

F. The quotient is $-3x^2 + 4x - 5$ and the remainder is -4.

G. The quotient is $-3x^2 + 4x - 5$ and the remainder is -5.

H. The quotient is $-3x^2 - 4x - 5$ and the remainder is -1.

7. Perform polynomial long division to find the quotient and remainder.

$$-5x^2 - x + 8 \overline{)\ -45x^3 - 24x^2 + 69x + 20}$$

A. The quotient is $9x - 3$ and the remainder is -7.

B. The quotient is $9x + 3$ and the remainder is -7.

C. The quotient is $9x - 3$ and the remainder is -4.

D. The quotient is $9x + 3$ and the remainder is -6.

E. The quotient is $9x - 3$ and the remainder is -6.

F. The quotient is $9x + 3$ and the remainder is -4.

G. The quotient is $9x - 3$ and the remainder is -2.

H. The quotient is $9x + 3$ and the remainder is -2.

8. Perform polynomial long division to find the quotient and remainder.

$$6x^2 + 4x - 7 \overline{)\ 12x^3 - 40x^2 - 46x + 57}$$

A. The quotient is $2x - 8$ and the remainder is 1.

B. The quotient is $2x - 8$ and the remainder is 2.

C. The quotient is $2x - 8$ and the remainder is -4.

D. The quotient is $2x + 8$ and the remainder is -4.

E. The quotient is $2x - 8$ and the remainder is -5.

F. The quotient is $2x + 8$ and the remainder is 1.

G. The quotient is $2x + 8$ and the remainder is -5.

H. The quotient is $2x + 8$ and the remainder is 2.