## What Do You Call a Sore on a Police Officer's Foot?

Factor completely each polynomial below. Find your answer and notice the letter next to it. Write this letter in the box containing the number of that exercise.



(2) 
$$x^3 + 11x^2 + 10x$$

$$(3)$$
 8 $x^3 - 18x$ 

(4) 
$$5x^3 - 40x^2 + 60x$$

(5) 
$$4x^2 + 8x - 60$$

(6) 
$$2x^3 - 20x^2 - 48x$$

## Answers:

(1) 
$$5x(x+3)(x-4)$$

(N) 
$$2x(2x+3)(2x-3)$$

(L) 
$$2x(x+6)(x-4)$$

(O) 
$$3(x-2)(x-3)$$

(C) 
$$4(x+5)(x-3)$$

(A) 
$$x(x+5)(x+3)$$

(S) 
$$4(x+5)(x-1)$$

(E) 
$$x(x + 10)(x + 1)$$

(H) 
$$2x(x-12)(x+2)$$

(O) 
$$5x(x-2)(x-6)$$

(R) 
$$2x(4x+9)(x+1)$$

$$(7)^{4}$$
  $4m^{2} - 18m + 14$ 

$$(8)$$
 15 $m^3$  + 24 $m^2$  + 9 $m$ 

$$(9)$$
  $15m^2 - 10m - 25$ 

$$(10)$$
 50 $m^3 - 2m$ 

(11) 
$$3m^2 - 10m + 8$$

(12) 
$$60\mathbf{m}^3 + 54\mathbf{m}^2 - 6\mathbf{m}$$

## Answers:

$$\bigcirc$$
 3m(5m + 3)(m + 1)

(S) 
$$5(3m+1)(m-5)$$

(R) 
$$(3m-4)(m-2)$$

$$(F)$$
 2(2 $m + 1$ )( $m + 7$ )

$$(T)$$
 5(3 $m$  – 5)( $m$  + 1)

(M) 
$$6m(5m-1)(2m-1)$$

(H) 
$$3m(5m+2)(m-1)$$

(N) 
$$2(2m-7)(m-1)$$

(P) 
$$2m(5m+1)(5m-1)$$

(C) 
$$6m(10m-1)(m+1)$$

(L) 
$$(3m-2)(m+4)$$