

Math worksheet on 'Polynomials - Find the Root of Square Polynomial (Level 1)'. Part of a broader unit on 'Polynomials and Quadratics - Advanced'

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This polynomial is a perfect square. What factor squared would give this polynomial?

$$y^2 + 0y + 0$$

| а | b | C | d | е | f |
|-----------|-----------|-------------|-----------|-----------|-------------|
| $(y+1)^2$ | $(y-3)^2$ | $(y + 2)^2$ | $(y-2)^2$ | $(y-1)^2$ | $(y + 0)^2$ |
| | | | | | |

This polynomial is a perfect square. What factor squared would give this polynomial?

$$p^2 + 4p + 4$$

| а | b | C | d | е | f |
|-----------|-------------|-------------|-----------|-------------|-----------|
| $(p+1)^2$ | $(p + 0)^2$ | $(p + 5)^2$ | $(p-1)^2$ | $(p + 4)^2$ | $(p+2)^2$ |
| | | | | | |

This polynomial is a perfect square. What factor squared would give this polynomial?

$$m^2 + 2m + 1$$

| a | $(m+0)^2$ | b | $(m-2)^2$ | |
|---|-----------|---|-------------|--|
| C | $(m-1)^2$ | d | $(m + 4)^2$ | |
| е | $(m+2)^2$ | f | $(m+1)^2$ | |

This polynomial is a perfect square. What factor squared would give this polynomial?

$$z^2 + 18z + 81$$

| a | $(z+9)^2$ | b | $(z + 8)^2$ | |
|---|--------------|---|-------------|--|
| C | $(z + 10)^2$ | d | $(z+12)^2$ | |
| е | $(z + 11)^2$ | f | $(z+6)^2$ | |

This polynomial is a perfect square. What factor squared would give this polynomial?

$$x^2 + 4x + 4$$

| а | $(x+5)^2$ | b | $(x+2)^2$ |
|---|-----------|---|-------------|
| C | $(x+1)^2$ | d | $(x+3)^2$ |
| е | $(x-1)^2$ | f | $(x + 0)^2$ |

This polynomial is a perfect square. What factor squared would give this polynomial?

$$c^2 - 10c + 25$$

| а | b | C | | е | f |
|-----------|-----------|-----------|-----------|-----------|-----------|
| $(c-8)^2$ | $(c-2)^2$ | $(c-5)^2$ | $(c-3)^2$ | $(c-4)^2$ | $(c-7)^2$ |
| | | | | | |

7 This polynomial is a perfect square. What factor squared would give this polynomial?

$$z^2 + 16z + 64$$

| а | $(z+9)^2$ | b | $(z + 8)^2$ |
|---|-------------|---|--------------|
| С | $(z + 5)^2$ | d | $(z + 10)^2$ |
| е | $(z+6)^2$ | f | $(z + 11)^2$ |