

Name : _____

Factors: Algebraic Identity

MS2

Factorize each expression using algebraic identity.

1) $8s^5 + 64s^4 + 30s^3$

2) $\frac{3}{p^2} + \frac{33}{p} + 84$

3) $4y^2z^2 - 56yz + 49$

5) $64t - 8t^2 - 9$

7) $\frac{25}{m^2} + \frac{50}{m} - 1$

9) $q^2 + 3qr - 10r^2$

10) $a^2b^2 + abc + 2ab + 2c$

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Name : _____

Answer key

MS2

Factors: Algebraic Identity

Factorize each expression using algebraic identity.

1) $8s^5 + 64s^4 + 30s^3$

$2s^3(2s + 1)(2s + 15)$

2) $\frac{3}{p^2} + \frac{33}{p} + 84$

$3\left(\frac{1}{p} + 7\right)\left(\frac{1}{p} + 4\right)$

3) $4y^2z^2 - 56yz + 25$

$(2yz - 25)(2yz - 25)$

5) $64t - 8t^2 - 9$

$-8(t - 6)(t - 3)$

7) $\frac{25}{m^2} + \frac{50}{m} - 1$

$\left(\frac{5}{m} - 1\right)\left(\frac{5}{m} + 1\right)$

9) $q^2 + 3qr - 10r^2$

$(q + 5r)(q - 2r)$

10) $a^2b^2 + abc + 2ab + 2c$

$(ab + 2)(ab + c)$

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