

A2.A.7: Factoring Polynomials 3: Factor polynomial expressions completely using common factor extraction, difference of perfect squares, quadratic trinomials

1 Factor: $x^2 + x + \frac{1}{4}$

2 Factor: $x^4 + \frac{x^2}{2} + \frac{1}{16}$

3 Factor: $\frac{x^2}{4} - xy + y^2$

4 Factor: $9x^4 - 12x^3 + 4x^2$

5 Factor: $16a^4 + 8a^2b^2 + b^4$

6 Factor: $12a^2 + 12ab + 3b^2$

7 Factor: $ax^2 - 4a^2x + 4a^3$

8 Factor: $4a^2 - 12ab + 9b^2$

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Answer Section

1 ANS:

$$\left(x + \frac{1}{2}\right)\left(x + \frac{1}{2}\right)$$

PTS: 2

REF: 069607al

2 ANS:

$$\left(x^2 + \frac{1}{4}\right)\left(x^2 + \frac{1}{4}\right)$$

PTS: 2

REF: 030003al

3 ANS:

$$\left(\frac{x}{2} - y\right)\left(\frac{x}{2} - y\right)$$

PTS: 2

REF: 060003al

4 ANS:

$$x^2(3x - 2)(3x - 2)$$

PTS: 2

REF: 039506al

5 ANS:

$$(4a^2 + b^2)(4a^2 + b^2)$$

PTS: 2

REF: 019405al

6 ANS:

$$3(2a + b)(2a + b)$$

PTS: 2

REF: 069607al

7 ANS:

$$a(x - 2a)(x - 2a)$$

PTS: 2

REF: 069802al

8 ANS:

$$(2a - 3b)(2a - 3b)$$

PTS: 2

REF: 119304al