

NAME: \_\_\_\_\_

*P.I. A.A.19: Identify and factor the difference of two perfect squares*

*P.I. A2.A.7: Factor polynomial expressions completely, using any combination of the following techniques: common factor extraction, difference of two perfect squares, quadratic trinomials*

Factor:

1.  $4x^2 - 9y^2$

2.  $16x^2 - 25y^2$

3.  $25x^2 - 64y^2$

4.  $36x^2 - 49y^2$

5.  $49x^2 - 36y^2$

6. Factor completely  $80x^2 - 125$ .

[A]  $5(16x - 25)(16x + 25)$

[B]  $(4x - 25)(20x + 5)$

[C]  $(20x - 5)(4x + 25)$

[D]  $5(4x - 5)(4x + 5)$

7. Factor completely  $32x^2 - 392$ .

[A]  $(2x - 56)(16x + 7)$

[B]  $(16x - 7)(2x + 56)$

[C]  $8(2x - 7)(2x + 7)$

[D]  $8(4x - 49)(4x + 49)$

8. Factor completely  $100x^2 - 144$ .

[A]  $4(5x - 6)(5x + 6)$

[B]  $(5x - 24)(20x + 6)$

[C]  $(20x - 6)(5x + 24)$

[D]  $4(25x - 36)(25x + 36)$

9. Factor completely  $24x^2 - 294$ .

[A]  $(12x - 7)(2x + 42)$

[B]  $(2x - 42)(12x + 7)$

[C]  $6(4x - 49)(4x + 49)$

[D]  $6(2x - 7)(2x + 7)$

10. Factor:  $\frac{9}{64}x^2 - \frac{4}{49}$

[A]  $\left(\frac{5}{32}x - \frac{2}{25}\right)\left(\frac{5}{32}x + \frac{2}{25}\right)$

[B]  $\left(\frac{5}{32}x - \frac{2}{25}\right)\left(\frac{5}{32}x - \frac{2}{25}\right)$

[C]  $\left(\frac{3}{8}x - \frac{2}{7}\right)\left(\frac{3}{8}x + \frac{2}{7}\right)$

[D]  $\left(\frac{3}{8}x - \frac{2}{7}\right)\left(\frac{3}{8}x - \frac{2}{7}\right)$

[1]  $(2x + 3y)(2x - 3y)$  \_\_\_\_\_

[2]  $(4x + 5y)(4x - 5y)$  \_\_\_\_\_

[3]  $(5x + 8y)(5x - 8y)$  \_\_\_\_\_

[4]  $(6x + 7y)(6x - 7y)$  \_\_\_\_\_

[5]  $(7x + 6y)(7x - 6y)$  \_\_\_\_\_

[6] D

[7] C

[8] A

[9] D

[10] C