

Name : \_\_\_\_\_

## Factorize & Simplify

DS5

Factorize each expression and reduce to its lowest term.

1)  $\frac{q^2 - 9}{q^2 - q - 12}$

2)  $\frac{b^2 - 6b + 36}{b^3 + 216}$

3)  $\frac{21t + 68 + 1}{-102 + t^2 + 1}$

$\frac{2y}{14}$

5)  $\frac{7m^3 + 46m^2}{m^3 - 16}$

$\frac{+ 28}{- 42r}$

7)  $\frac{a^2 + 14a - 51}{a^2 - 289}$

8)  $\frac{4x^2 - 36x + 80}{9x - 45}$

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**Answer key**

DS5

**Factorize & Simplify**

Factorize each expression and reduce to its lowest term.

1)  $\frac{q^2 - 9}{q^2 - q - 12}$

$\frac{q - 3}{q - 4}$

2)  $\frac{b^2 - 6b + 36}{b^3 + 216}$

$\frac{1}{b + 6}$

3)  $\frac{21t + 68 + 1}{-102 + t^2 + 1}$

$\frac{t + 4}{t - 6}$

5)  $\frac{7m^3 + 46m^2}{m^3 - 16}$

$\frac{7m + 18}{m - 4}$

7)  $\frac{a^2 + 14a - 51}{a^2 - 289}$

$\frac{a - 3}{a - 17}$

8)  $\frac{4x^2 - 36x + 80}{9x - 45}$

$\frac{4(x - 4)}{9}$

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+ 28  
- 42r