

**A2.A.16: Addition and Subtraction of Rationals 3: Perform arithmetic operations with rational expressions and rename to lowest terms**

1 Simplify:  $\frac{a-1}{1-a} + \frac{1-b}{b-1}$

2 Express in simplest form:  $\frac{3x}{2x-6} + \frac{9}{6-2x}$

3 Express in simplest form:  $\frac{1}{x} + \frac{1}{x+3}$

4 Express in simplest form:  $\frac{3a+1}{a^2-1} - \frac{1}{a+1}$

5 Express in simplest form:  $\frac{3y+15}{25-y^2} + \frac{2}{y-5}$

6 Simplify:  $\frac{a+2}{a^2-5a+6} + \frac{a+2}{a^2-7a+12} + \frac{1}{a^2-6a+8}$

7 Simplify:  $\frac{m}{mn-n^2} - \frac{1}{m-n} - \frac{1}{n}$

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## **Answer Section**

1 ANS:  
-2

PTS: 2 REF: 119403al

2 ANS:  
 $\frac{3}{2}$

PTS: 4 REF: 060929b

3 ANS:  
 $\frac{2x+3}{x(x+3)}$

PTS: 2 REF: 060524b

4 ANS:  
 $\frac{2}{a-1}$

PTS: 5 REF: 018439siii

5 ANS:  
 $\frac{1}{5-y}$

PTS: 5 REF: 069740siii

6 ANS:  
 $\frac{2a+5}{(a-2)(a-4)}$

PTS: 12 REF: 090501al

7 ANS:  
0

PTS: 2 REF: 019103al