

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

1. 069906a, P.I. A2.A.16

Expressed as a single fraction, what is

$$\frac{1}{x+1} + \frac{1}{x}, x \neq 0, -1?$$

[A]  $\frac{2x+3}{x^2+x}$

[B]  $\frac{2}{2x+1}$

[C]  $\frac{2x+1}{x^2+x}$

[D]  $\frac{3}{x^2}$

2. 060524b, P.I. A2.A.16

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

3. 010315b, P.I. A2.A.16

What is the sum of  $\frac{3}{x-3}$  and  $\frac{x}{3-x}$ ?

[A] 1      [B] 0      [C]  $\frac{x+3}{x-3}$       [D] -1

4. 060929b, P.I. A2.A.16

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

5. 080505b, P.I. A2.A.16

What is the sum of  $(y-5) + \frac{3}{y+2}$ ?

[A]  $y-5$

[B]  $\frac{y^2-7}{y+2}$

[C]  $\frac{y^2-3y-7}{y+2}$

[D]  $\frac{y-2}{y+2}$

6. 080805b, P.I. A2.A.16

The expression  $\frac{6}{y-5} - \frac{y+5}{y^2-25}$  is equivalent to

[A]  $\frac{5y}{y-5}$

[B]  $\frac{5}{y-5}$

[C]  $\frac{5}{y+5}$

[D]  $\frac{5y}{y+5}$

7. 080733b, P.I. A2.A.16

Express in simplest form:

$$\frac{2x}{x^2-4} \div \frac{4}{x^2-4x+4} + \frac{12}{x^2-4} \cdot \frac{2-x}{3}$$

8. 060816b, P.I. A2.A.16

The expression  $\frac{2}{\sin x} - \frac{5}{\sin x - 1}$  is equivalent to

[A]  $\frac{-3 \sin x - 2}{\sin x - 1}$

[B]  $\frac{-3 \sin x - 2}{\sin x(\sin x - 1)}$

[C]  $\frac{-3}{\sin x(\sin x - 1)}$

[D]  $\frac{-3}{\sin x - 1}$

[1] C

[2]  $\frac{2x+3}{x(x+3)}$  or  $\frac{2x+3}{x^2+3x}$ , and appropriate work is shown.

[1] Appropriate work is shown, but one computational error is made or the answer is not simplified completely.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1]  $\frac{2x+3}{x(x+3)}$  or  $\frac{2x+3}{x^2+3x}$ , but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[2] incorrect procedure.

[3] D

[4]  $\frac{3}{2}$ , and appropriate work is shown.

[3] Appropriate work is shown, but one computational, factoring, or simplification error is made.

[2] Appropriate work is shown, but two or more computational, factoring, or simplification errors are made.

or [2] Appropriate work is shown, but one conceptual error is made, such as not factoring out  $-1$ .

or [2] Appropriate work is shown, but the answer is left as  $\frac{3x-9}{2(x-3)}$  or as an

equivalent expression.

[1] Appropriate work is shown, but one conceptual error and one computational, factoring, or simplification error are made.

or [1] Appropriate work is shown, but the answer is left as  $\frac{3x}{2(x-3)} + \frac{9}{2(3-x)}$ .

or [1]  $\frac{3}{2}$ , but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[4] incorrect procedure.

[5] C

[6] B

[6]  $\frac{x-4}{2}$ , and appropriate work is shown.

[5] Appropriate work is shown, but one computational error is made.

[4] Appropriate work is shown, but two or more computational errors are made.

or [4] Appropriate work is shown, but  $-1$  is not factored out.

[3] Appropriate work is shown, but one conceptual error is made, such as not following the correct order of operations.

[2] Appropriate work is shown, but one conceptual error and one computational error are made.

[1] Appropriate work is shown, but one conceptual error and two or more computational errors are made.

or [1] Appropriate work is shown, but two conceptual errors are made.

or [1]  $\frac{x-4}{2}$ , but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[7] incorrect procedure.

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[8] B \_\_\_\_\_