

12-5 Adding and Subtracting Rational Expressions

Warm Up

Lesson Presentation

Lesson Quiz

Holt Algebra 1

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12-5 Adding and Subtracting Rational Expressions

Warm Up

Add. Simplify your answer.

1. $\frac{3}{4} + \frac{3}{4} = \frac{3}{2}$

2. $\frac{5}{6} + \frac{1}{6} = 1$

3. $\frac{1}{4} + \frac{2}{3} = \frac{11}{12}$ $\frac{3}{12} + \frac{8}{12}$

4. $\frac{1}{2} + \frac{2}{5} = \frac{9}{10}$

Subtract. Simplify your answer.

5. $\frac{5}{8} - \frac{1}{8} = \frac{1}{2}$

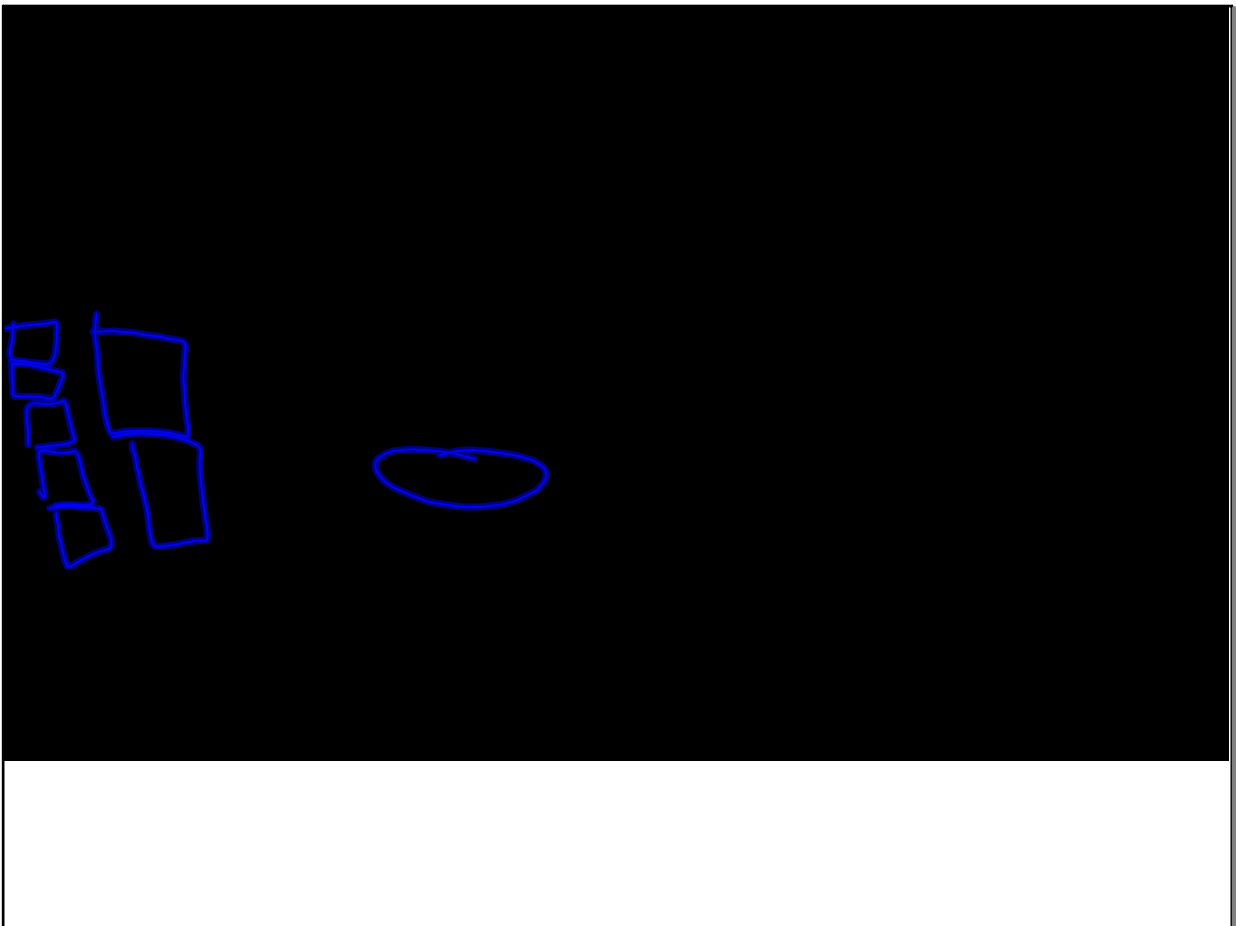
6. $\frac{4}{3} - \left(-\frac{1}{3}\right) = \frac{5}{3}$

7. $\frac{7}{9} - \frac{1}{5} = \frac{26}{45}$

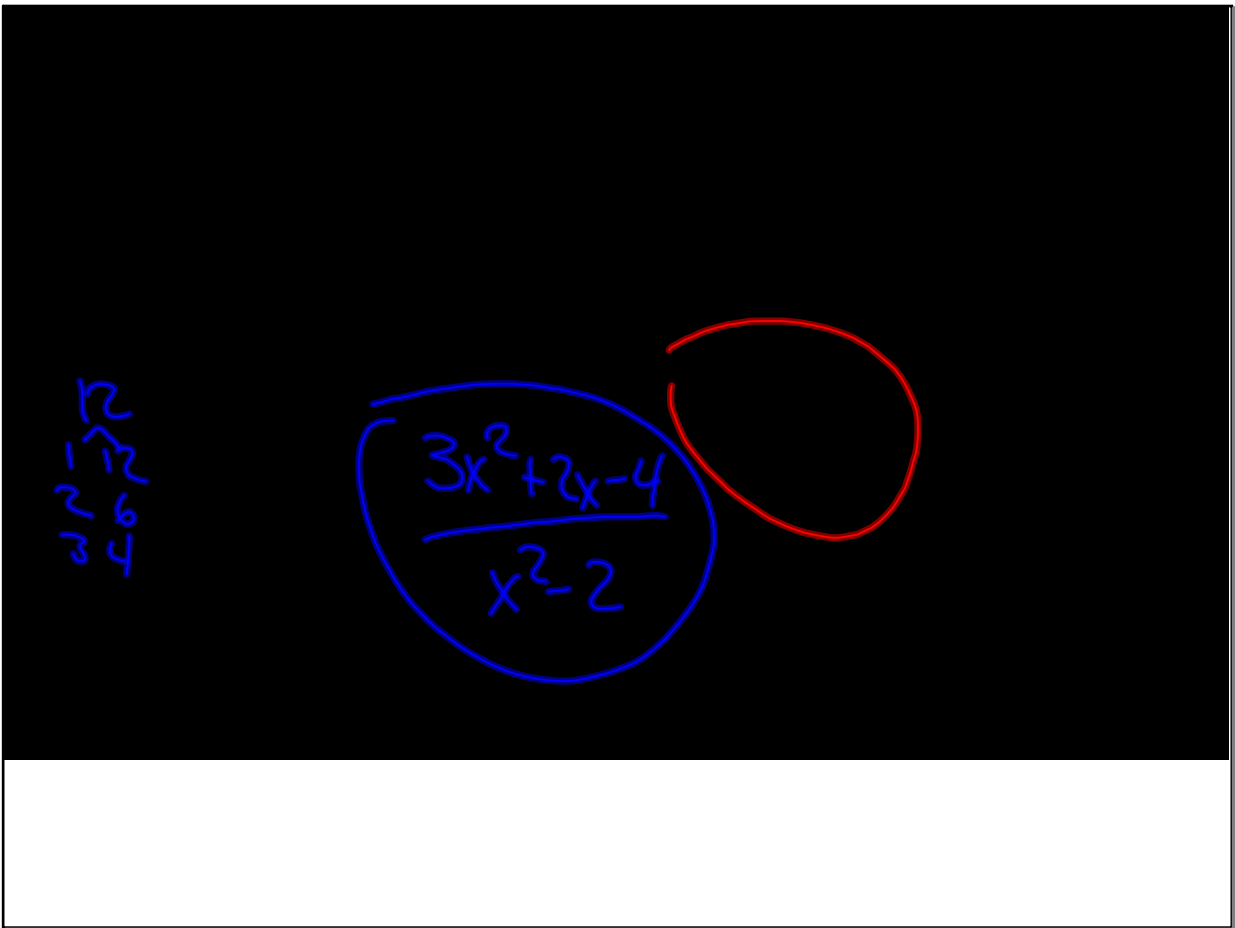
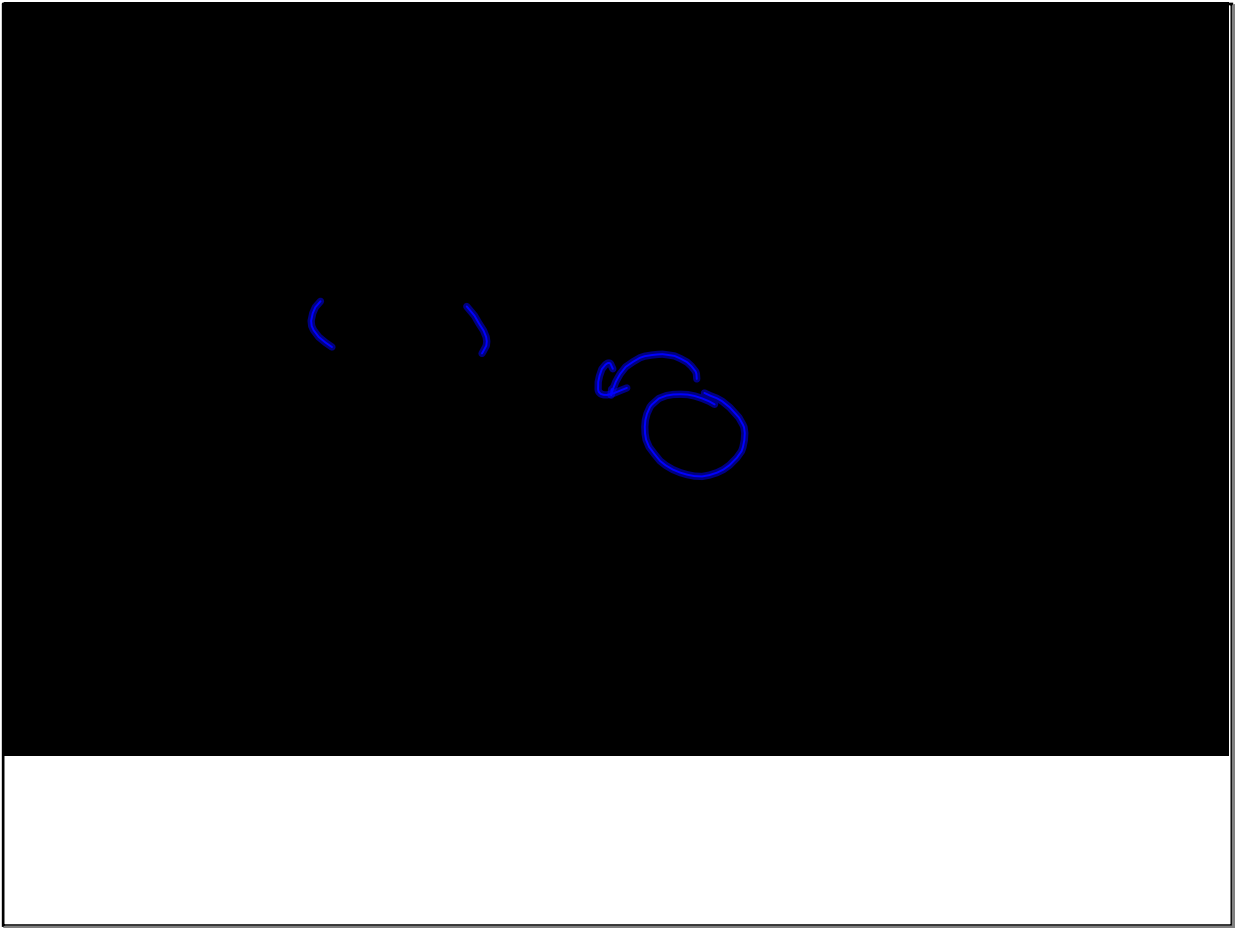
8. $\frac{2}{5} - 1 = -\frac{3}{5}$

Holt Algebra 1

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Handwritten mathematical work on a black background. At the top, there is a green oval with two blue arrows pointing outwards. Below this, there is a red curved line. In the lower-left quadrant, the fraction $\frac{5(y-2)}{(y+6)(y-2)}$ is written in blue ink.



()

$$\frac{3(a+2)}{(a+2)(a-2)}$$

8
16
24x2

+

-

-

12
24
36

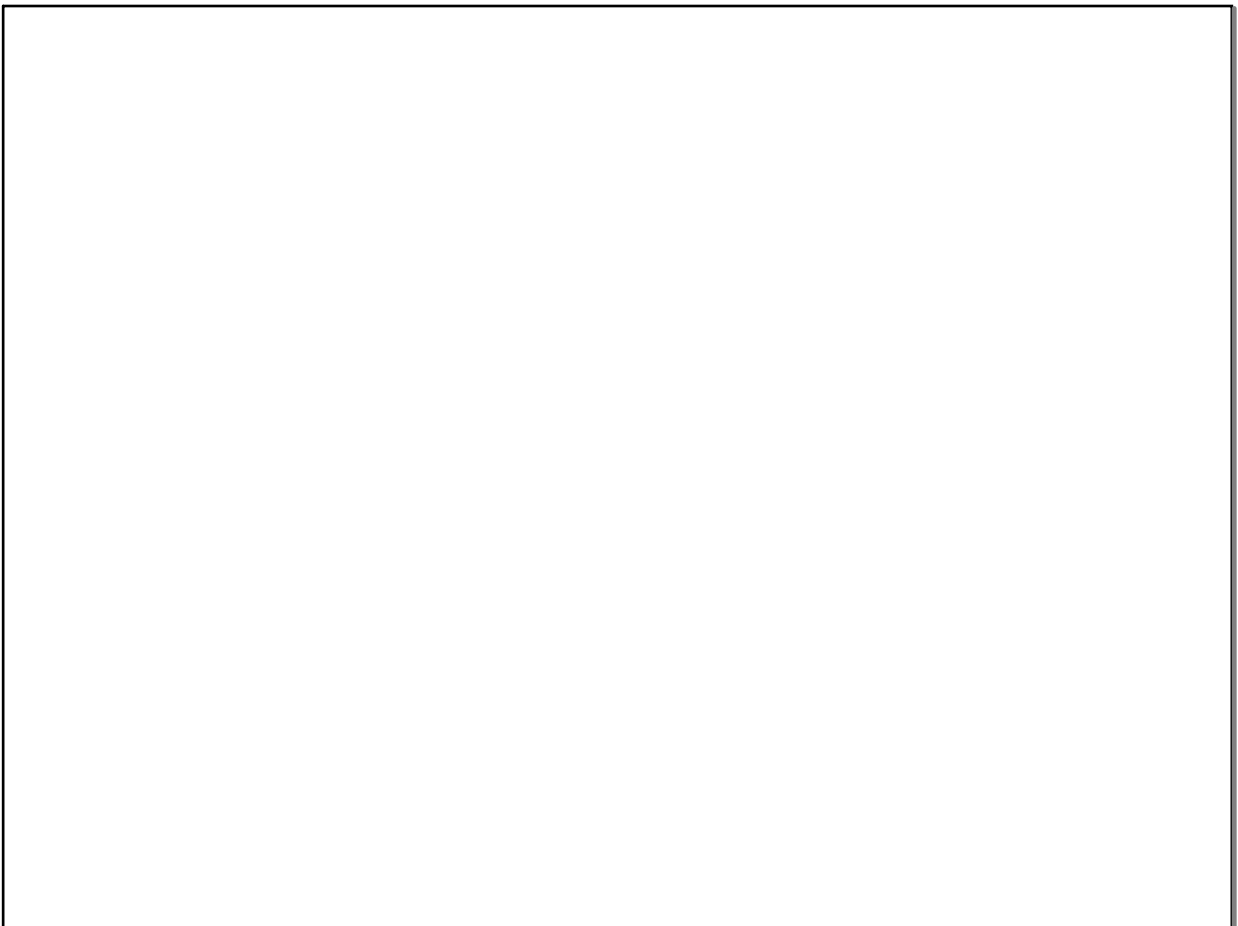
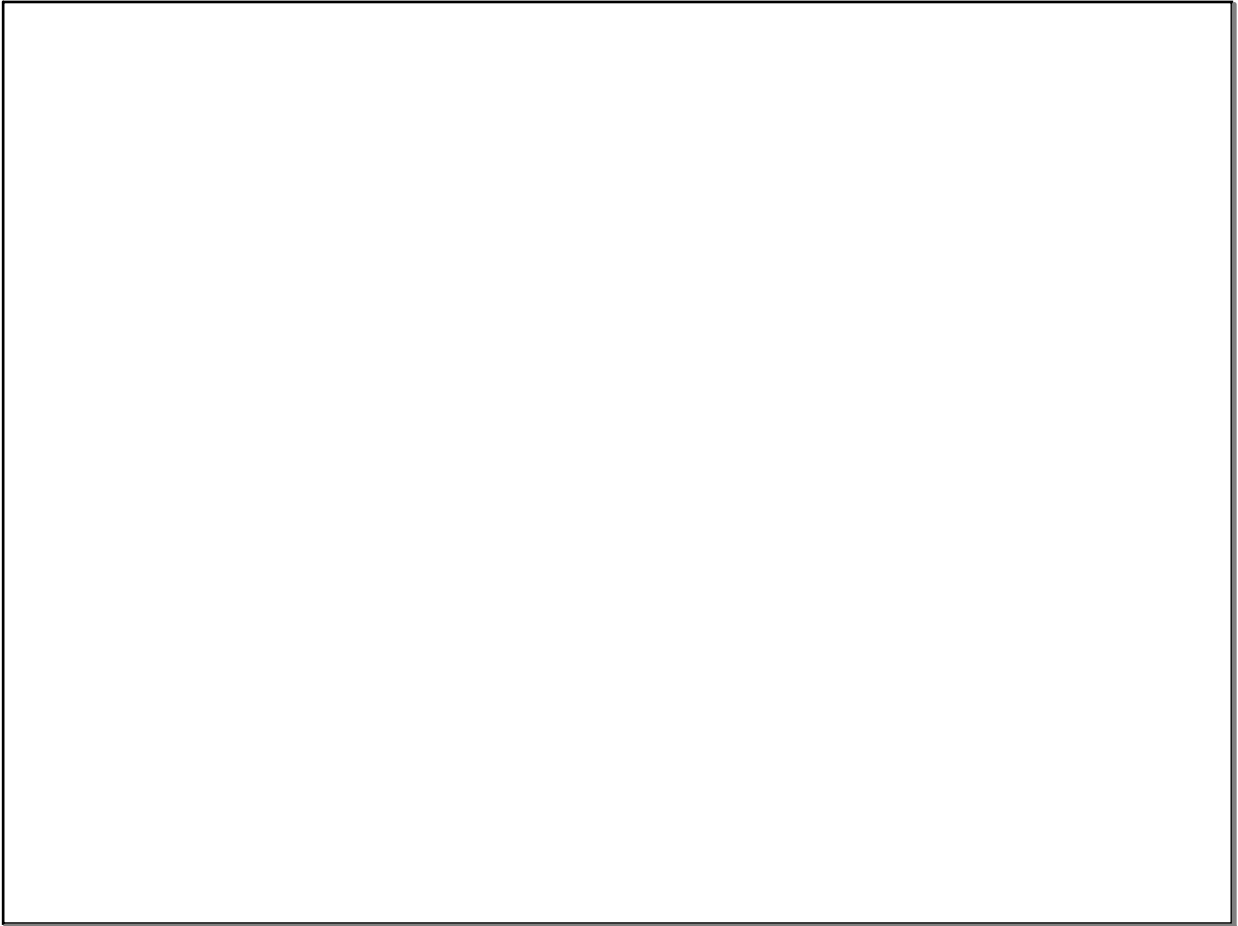
15

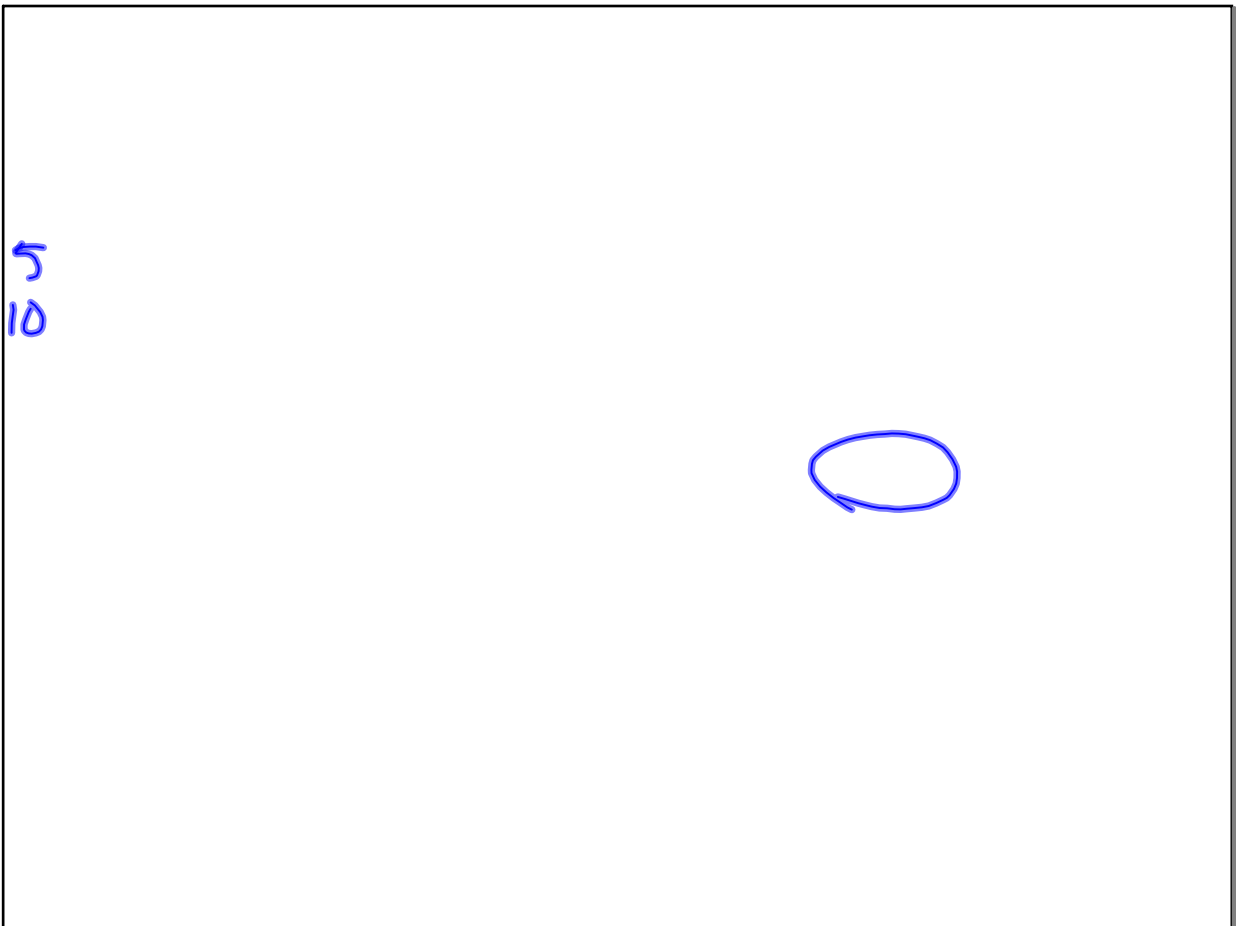
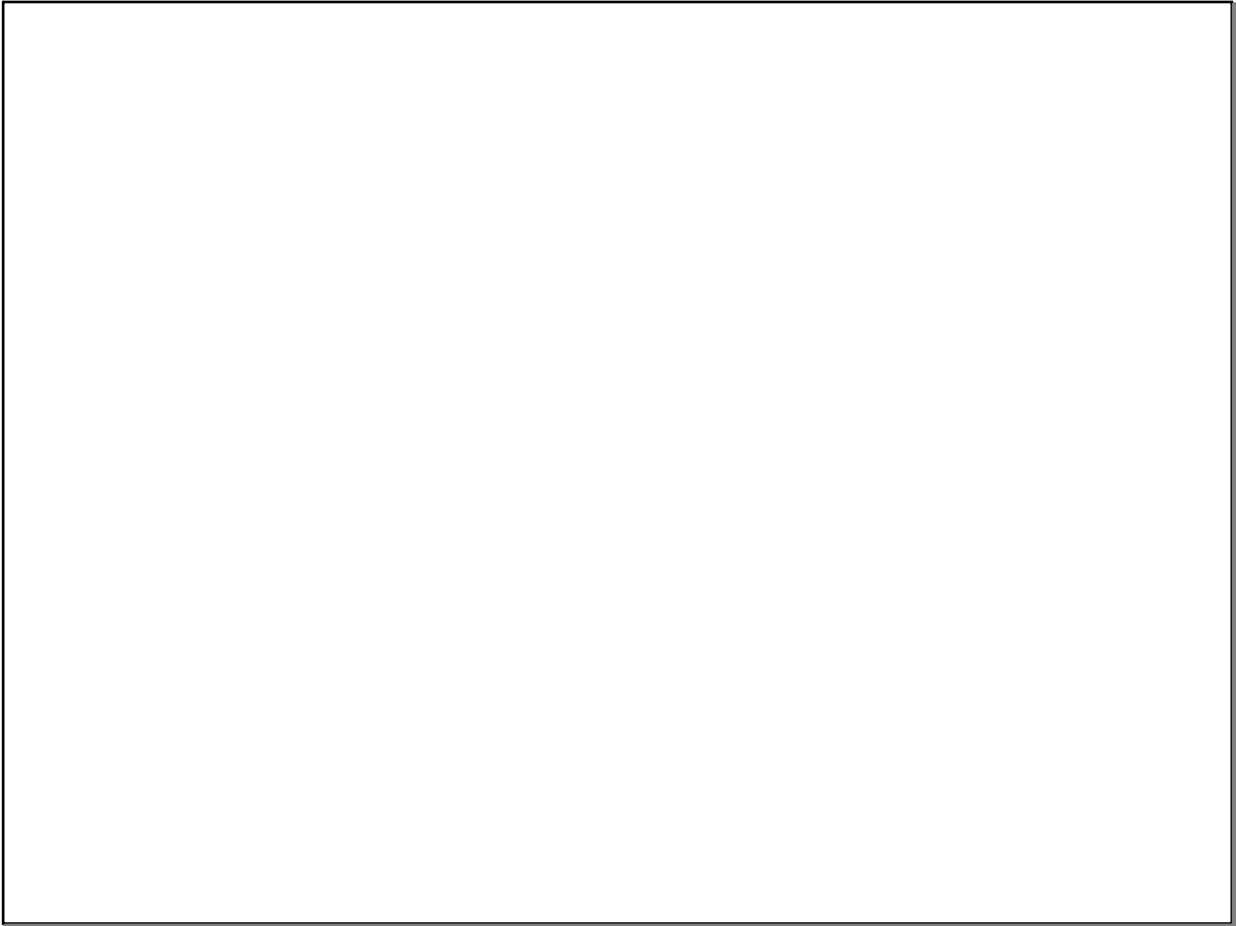
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0

$36x^2y^3$

$15f^2h^2$





$$\frac{2 \cancel{4n}(1+5n)}{5 \cancel{10n^2}}$$
$$\frac{2(1+5n)}{5n^2}$$

$$\left(\right) = \frac{\cancel{3b} + 4 \cdot 5 + 2b}{7-b} \quad \frac{5b-1}{7-b}$$

$12x^2$ $\left(\frac{2}{2}\right)$ $\left(\frac{3x}{3x}\right)$

$$\frac{6x}{12x^2} + \frac{6x^2}{12x^2} = \frac{6x^2 + 6x}{12x^2}$$

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

$$\frac{1}{2x} + \frac{x}{2x} = \frac{x+1}{2x}$$

$$\frac{6x(x+1)}{12x^2}$$

$$\frac{x+1}{2x}$$

 ~~$a(a+4)$~~ ~~$(a+4)(a-2)$~~

$$\frac{a}{a-2} + \frac{8}{a-2} = \frac{a+8}{a-2}$$

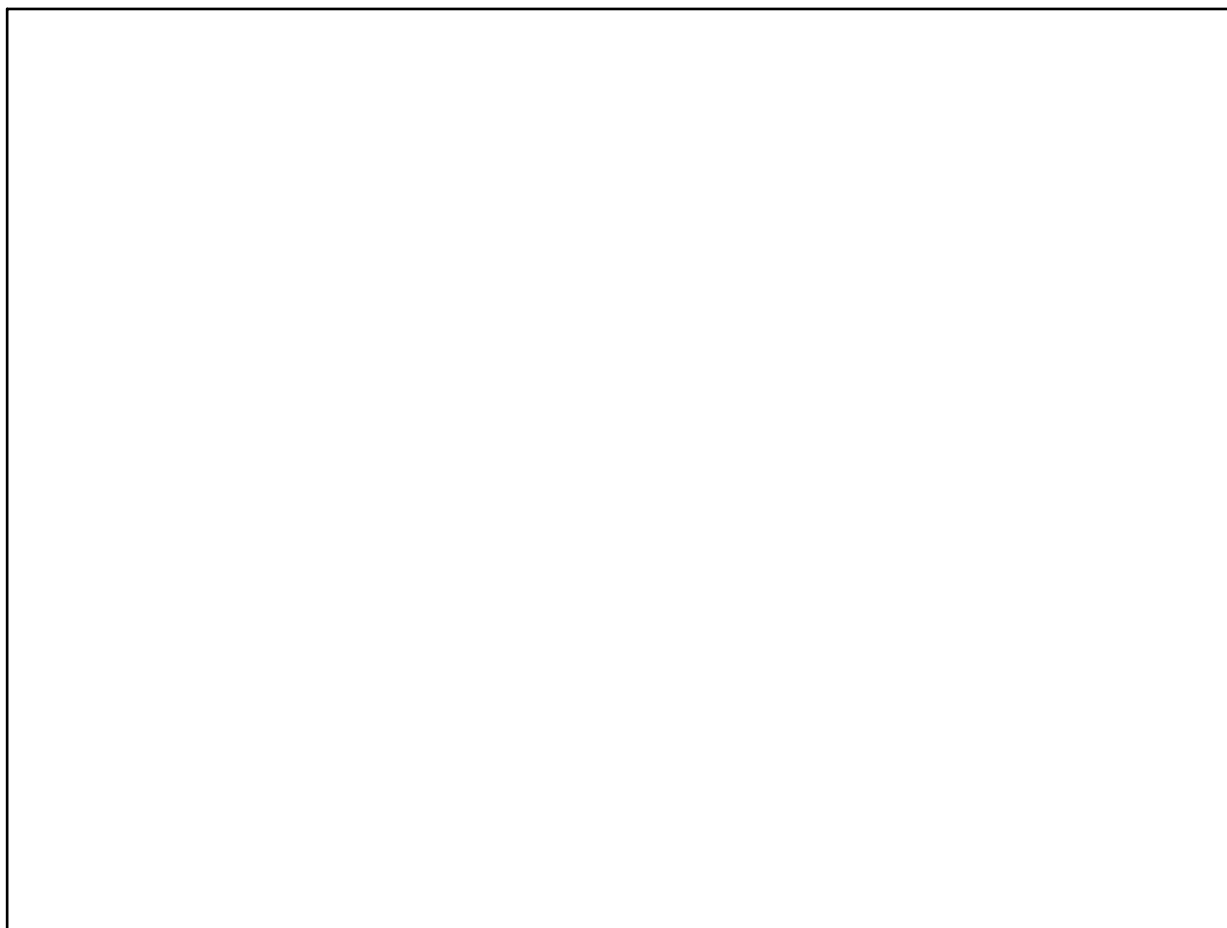
$x = \text{current}$

$\frac{2}{x} + \frac{2}{3x}$

$\frac{2}{2.5} + \frac{2}{3(2.5)} = \frac{6}{7.5} + \frac{2}{7.5} = \frac{8}{7.5}$

$\frac{2}{x} + \frac{2}{3x}$

$\left(\frac{3}{3}\right) \frac{2}{2.5} + \frac{2}{3(2.5)} = \frac{6}{7.5} + \frac{2}{7.5} = \frac{8}{7.5}$



$$\left(\frac{x+1}{x+1} \right) \frac{5(x+1)}{(x-7)(x+1)} = \frac{5(x+1)+11}{(x-7)(x+1)} = \frac{5x+5+11}{(x-7)(x+1)} = \frac{5x+16}{x^2-6x-7}$$

(Note: In the original image, the term $5(x+1)$ in the numerator is crossed out in red, and the term $(x-6)$ in the denominator is crossed out in red. A black redaction box covers the original denominator $(x-7)(x-6)$. The final result x^2-6x-7 is reached via FOIL.)

Thurs
p. 902 1-4, 10, 12, 14
15, 16, 19, 20