Multiplying Rational Expressions

Name: _____
Period:

For each problem: factor and simplify.

① $\frac{x^3}{2y^2} \cdot \frac{6y^4}{xy}$

② $\frac{5xy^2}{4x^2} \cdot \frac{8x^3y}{15y^5}$

③ $\frac{x^2+7x+12}{x-5} \cdot \frac{2x-10}{x+3}$

④ $\frac{x^2-3x-10}{x+7} \cdot \frac{3x+21}{6x-30}$

⑤ $\frac{x-1}{4xy^3} \cdot \frac{6x^2y}{1-x}$

⑥ $\frac{13xy^2}{x^2+3x-18} \cdot \frac{x^2-9}{26x^4y^2}$

⑦ $\frac{25-x^2}{14x^3y^8} \cdot \frac{7x^2y}{8x+40}$

⑧ $\frac{2x^2+5x-7}{x+4} \cdot \frac{x^2+4x}{x^2-2x+1}$

⑨ $\frac{2x+10}{32-8x} \cdot \frac{x^2-10x+24}{x^2-x-30}$

⑩ $\frac{12x+48}{6x-15} \cdot \frac{4x^2-25}{x^2+9x+20}$

Answers:

Ⓖ $-\frac{3x}{2y^2}$	Ⓞ $\frac{4(2x+5)}{x+5}$	Ⓛ $\frac{x+3}{2x^3(x+6)}$
Ⓕ $-\frac{x-4}{x+4}$	Ⓗ $3x^2y$	Ⓣ $-\frac{1}{4}$
Ⓓ $\frac{2x^2}{3y^2}$	Ⓘ $\frac{x+2}{2}$	Ⓔ $2(x+4)$
Ⓝ $\frac{x(2x+7)}{x-1}$	Ⓢ $-\frac{x-5}{16xy^7}$	Ⓐ $\frac{4(2x-5)}{3(x+4)}$

What Do You Call a Message Printed on a Lion With Chickenpox?

7	4	5	8	10	8	9	1	3	2	10	9	9	3	2	6	4	10	8