

Dividing Rational Expressions

Name: _____

Period: _____

For each problem: factor and simplify.

① $\frac{12m^2n^5}{m+5} \div \frac{3m^3n}{m^2-25}$

② $\frac{n^2-9n+20}{6m^7n^2} \div \frac{5n-20}{10mn^2}$

③ $\frac{m^2}{m^2-7m} \div \frac{1}{m^2-4m-21}$

④ $\frac{16-2m}{m^2+2m-24} \div \frac{m-8}{3m+18}$

⑤ $\frac{12n-36}{9-n^2} \div \frac{8n^5}{n^2+3n}$

⑥ $\frac{m^2-n^2}{m^2+2mn+n^2} \div \frac{m^2n-mn^2}{7m^2}$

⑦ $\frac{n^2-n-12}{2n^2-15n+18} \div \frac{3n^2-12n}{2n^3-9n^2}$

⑧ $\frac{17mn^3}{m^2+2m-35} \div \frac{34m^8n^4}{m^2+7m}$

⑨ $\frac{4n^3-25n}{3n^2-16n+5} \div (10n+25)$

Answer:

Ⓜ $7m(m-n)$

Ⓝ $-3n^4(n-3)$

Ⓣ $m(m+3)$

ⓓ $-\frac{3}{2n^4}$

Ⓤ $\frac{4n^4(m-5)}{m}$

Ⓡ $\frac{1}{2m^4n(m-7)}$

Ⓢ $\frac{n(2n-9)(n+3)}{3(2n-3)(n-6)}$

Ⓡ $-\frac{6}{m-4}$

Ⓐ $\frac{n(2n-5)}{5(3n-1)(n-5)}$

Ⓦ $\frac{7m}{n(m+n)}$

Ⓛ $\frac{1}{2m^6n(m-5)}$

ⓔ $\frac{n-5}{3m^6}$

What Happened to the Peanut Who Went
Walking Late at Night?

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