

Name : _____

Dividing Polynomials

Sheet 1

Divide by factorization method.

$$1) \frac{(x + y)(8x - 16y)}{x^2 - xy - 2y^2}$$

$$2) \frac{6n^3 - 5n^2 - 54n + 45}{n + 3}$$

$$3) \frac{12p^4 - 36p^3 + 27p^2}{2p - 3}$$

$$4) \frac{(s - 3r)^2(s + 4r)}{s^2 + rs - 12r^2}$$

$$5) \frac{(5d^2 + 34d - 7)(d + 7)}{d^2 + 14d + 49}$$

$$6) \frac{3u^5 - 75u^3}{(u + 5)(u - 5)}$$

$$7) \frac{2h^3 - 7h^2 - 10h + 35}{h^2 - 5}$$

$$8) \frac{4a^4 + 32a^3 - 36a^2}{4a^3 + 36a^2}$$

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Answer key

Sheet 1

Dividing Polynomials

Divide by factorization method.

$$1) \frac{(x+y)(8x-16y)}{x^2-xy-2y^2}$$

8

$$2) \frac{6n^3-5n^2-54n+45}{n+3}$$

(n-3)(6n-5)

$$3) \frac{12p^4-36p^3+27p^2}{2p-3}$$

$3p^2(2p-3)$

$$4) \frac{(s-3r)^2(s+4r)}{s^2+rs-12r^2}$$

s-3r

$$5) \frac{(5d^2+34d-7)(d+7)}{d^2+14d+49}$$

5d-1

$$6) \frac{3u^5-75u^3}{(u+5)(u-5)}$$

$3u^3$

$$7) \frac{2h^3-7h^2-10h+35}{h^2-5}$$

2h-7

$$8) \frac{4a^4+32a^3-36a^2}{4a^3+36a^2}$$

a-1