8.4B HW

Friday, March 28, 2014
12:18 PM

Divide the expressions. Simplify the result.

13. $\frac{10x^4}{3xy^2} \div \frac{6x^2y}{xy^4}$

$\frac{10x^4}{3xy^2} \cdot \frac{xy^4}{6x^2y} = \frac{5x^2y}{9}$

14. $\frac{16x^2y}{81xy^2} \div \frac{24x^2y}{54x^3y^3}$

$\frac{16x^2y}{81xy^2} \cdot \frac{54x^3y^3}{24x^2y}$

$\frac{4x^5y^4}{9x^3y^3} = \frac{4x^2y}{9}$

15. $\frac{2x^2+4x}{x^2-4} \div \frac{x^2-3x+2}{3x-6}$

$\frac{2x^2+4x}{x^2-4} \cdot \frac{3x-6}{x^2-3x+2}$

$\frac{2x(x+2)}{(x+2)(x-2)} \cdot \frac{3(x-2)}{(x-2)(x-1)}$

$\frac{2x}{(x-2)(x-1)} = \frac{2x}{x^2-3x+2}$

16. $\frac{9x^2}{6x-3} \div \frac{3x^2-12x}{2x^2-x}$

$\frac{9x^2}{6x-3} \cdot \frac{2x^2-x}{3x^2-12x}$

$\frac{9x^2}{3(2x-1)} \cdot \frac{x(2x-1)}{3x(x-4)}$

$\frac{x^2}{x-4}$

17. $(x^2+9x+18) \div \frac{x^2-3x-18}{x^2-9x+18}$

$x^2+9x+18 \cdot \frac{x^2-9x+18}{x^2-3x-18}$

$(x+3)(x+6) \cdot \frac{(x-3)(x-6)}{(x-6)(x+3)}$

$(x+6)(x-6)$

x^2-36

18. $\frac{3x^2+4x+1}{x^2-4} \div \frac{x+1}{x^2+8x+12}$

$\frac{3x^2+4x+1}{x^2-4} \cdot \frac{x^2+8x+12}{x+1}$

$\frac{(3x+1)(x+1)}{(x+2)(x-2)} \cdot \frac{(x+6)(x+2)}{(x+1)}$

$\frac{(3x+1)(x+6)}{x-2} = \frac{3x^2+19x+6}{x-2}$

WS

① 10 | 2 | −13 | −77 | 60

	20	70	−70
2	7	−7	−10

$2k^2+7k-7-\frac{10}{k-10}$

② 1 | 10 50 0 -60

10 60 60

10 60 60 0

$10r^2+60r+60$

③ $x^2+0x+3 \overline{)\, x^4+0x^3+0x^2+0x-9}$

x^2+0x-3

$-(x^4+0x^3+3x^2)$

$-3x^2+0x-9$

$-(-3x^2+0x-9)$

0

④ $\dfrac{5x^3+11x^2+26x+26}{5x+6}$

$5x+6=0$

$5x=-6$

$x=-\frac{6}{5}$

$-\frac{6}{5}$ | 5 11 26 26

-6 -6 -24

5 5 20 2

$5x^2+5x+20+\frac{2}{5x+6}$

⑤ $\dfrac{x^6+2x^4+6x-9}{x^2+3}$

$x^4+0x^3-x^2+0x+3$

$x^2+0x+3 \overline{)\, x^6+0x^5+2x^4+0x^3+0x^2+6x-9}$

$-(x^6+0x^5+3x^4)$

$0x^5-x^4+0x^3$

$-(0x^5+0x^4+0x^3)$

$-x^4+0x^3+0x^2$

$-(-x^4+0x^3-3x^2)$

$0x^3+3x^2+6x$

$-(0x^3+0x^2+0x)$

$x^4-x^2+3+\frac{6x-18}{x^2+3}$

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WB

(13) $\frac{5x^2y}{9}$

(14) $\frac{4x^2y}{9}$

(15) $\frac{2x}{x^2-3x+2}$

(16) $\frac{x^2}{x-4}$

(17) x^2-36

(18) $\frac{3x^2+19x+6}{x-2}$

WS

① $2k^2+7k-7-\frac{10}{k-10}$

② $10r^2+60r+60$

③ x^2-3

④ $5x^2+5x+20+\frac{2}{5x+6}$

⑤

$3x^2+6x-9$
$-(3x^2+0x+9)$
$6x-18$