

DIVIDING POLYNOMIALS

Dividing Polynomials by a Constant

① a) $\frac{12k}{4}$

b) $\frac{-12k}{4}$

c) $\frac{12k}{-4}$

d) $\frac{-12k}{-4}$

② a) $\frac{12p-18}{6}$

b) $\frac{-6q^2-10}{2}$

c) $\frac{5h^2-20h}{5}$

d) $\frac{4r^2-16r+6}{2}$

e) $\frac{-8a^2+4a-12}{4}$

f) $\frac{6x^2+3x+9}{3}$

③ An equilateral triangle has a perimeter of $15a^2+21a+6$. Write a polynomial that represents the length of one side.

Dividing Polynomials by a Single Variable Monomial

④ a) $\frac{12x}{2x}$

b) $\frac{12x}{-2x}$

c) $\frac{-12x}{2x}$

d) $\frac{-12x}{-2x}$

e) $\frac{12x^2}{2x}$

f) $\frac{12x^2}{2x^2}$

g) $\frac{-12x^2}{2x^2}$

h) $\frac{12x^2}{-2x^2}$

⑤ a) $\frac{10x^2+4x}{2x}$

b) $\frac{6x^2+4x}{x}$

c) $\frac{6y+3y^2}{3y}$

d) $\frac{40x^2-16x}{8x}$

⑥ a) $\frac{12x^2+6xy}{3x}$

b) $\frac{12gh+6g}{2g}$

c) $\frac{-27p^2+36pq}{9p}$

e) $(15g-10g^2) \div 5g$

f) $(-12k-24k^2) \div 3k$

g) $(24h^2+36h) \div (-4h)$

h) $(-8m^2+18m) \div (-2m)$

ANSWERS

① a) $3K$ b) $-3K$ c) $-3K$ d) $3K$

② a) $2p-3$ b) $-3q^2-5$ c) h^2-4h d) $2r^2-8r+3$

e) $-2a^2+a-3$ f) $2x^2+x+3$

③ $\frac{15a^2+21a+6}{3} = 5a^2+7a+2.$

④ a) 6 b) -6 c) -6 d) 6 e) $6x$ f) 6 g) -6 h) -6

⑤ a) $5x+2$ b) $6x+4$ c) $2+y$ d) $5x-2$

e) $3-2g$ f) $-4-8k$ g) $-6h-9$ h) $4m-9$