数学

単項式と多項式
単項式の除法

1 次の計算をしなさい。

① $12x \div 2x$

② $49xy \div (-7x)$

③ $(-9x^2) \div (-3x)$

④ $32a^3 \div (-8a^2)$

⑤ $54x^2 \div \frac{9}{10}x$

⑥ $36ab \div (-\frac{4}{5}a)$

⑦ $\frac{8}{9}xy \div (-\frac{4}{27}y)$

⑧ $(-\frac{4}{3}a^2) \div (-\frac{2}{9}a)$

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1 次の計算をしなさい。

① $12x \div 2x$

$= \dfrac{\overset{6}{\cancel{12}}\,\overset{1}{\cancel{x}}}{\underset{1}{\cancel{2}}\,\underset{1}{\cancel{x}}}$

$= 6$

② $49xy \div (-7x)$

$= -\dfrac{\overset{7}{\cancel{49}}\,\overset{1}{\cancel{x}}\,y}{\underset{1}{\cancel{7}}\,\underset{1}{\cancel{x}}}$

$= -7y$

③ $(-9x^2) \div (-3x)$

$= \dfrac{\overset{3}{\cancel{9}} \times \overset{1}{\cancel{x}} \times x}{\underset{1}{\cancel{3}}\,\underset{1}{\cancel{x}}}$

$= 3x$

④ $32a^3 \div (-8a^2)$

$= -\dfrac{\overset{4}{\cancel{32}} \times \overset{1}{\cancel{a}} \times \overset{1}{\cancel{a}} \times a}{\underset{1}{\cancel{8}} \times \underset{1}{\cancel{a}} \times \underset{1}{\cancel{a}}}$

$= -4a$

⑤ $54x^2 \div \dfrac{9}{10}x$

$= 54x^2 \times \dfrac{10}{9x}$

$= \dfrac{\overset{6}{\cancel{54}} \times 10 \times \overset{1}{\cancel{x}} \times x}{\underset{1}{\cancel{9}}\,\underset{1}{\cancel{x}}}$

$= 60x$

⑥ $36ab \div \left(-\dfrac{4}{5}a\right)$

$= 36ab \times \left(-\dfrac{5}{4a}\right)$

$= -\dfrac{\overset{9}{\cancel{36}} \times 5 \times \overset{1}{\cancel{a}} \times b}{\underset{1}{\cancel{4}}\,\underset{1}{\cancel{a}}}$

$= -45b$

⑦ $\dfrac{8}{9}xy \div \left(-\dfrac{4}{27}y\right)$

$= \dfrac{8}{9}xy \times \left(-\dfrac{27}{4y}\right)$

$= -\dfrac{\overset{2}{\cancel{8}} \times \overset{3}{\cancel{27}} \times x \times \overset{1}{\cancel{y}}}{\underset{1}{\cancel{9}} \times \underset{1}{\cancel{4}} \times \underset{1}{\cancel{y}}}$

$= -6x$

⑧ $\left(-\dfrac{4}{3}a^2\right) \div \left(-\dfrac{2}{9}a\right)$

$= \left(-\dfrac{4}{3}a^2\right) \times \left(-\dfrac{9}{2a}\right)$

$= \dfrac{\overset{2}{\cancel{4}} \times \overset{3}{\cancel{9}} \times \overset{1}{\cancel{a}} \times a}{\underset{1}{\cancel{3}} \times \underset{1}{\cancel{2}} \times \underset{1}{\cancel{a}}}$

$= 6a$