1 解答　(1) $-3a^3$　(2) $4xy$　(3) $3a$　(4) $-2x^2y$　(5) $4b^2$　(6) $-y^3$
(7) $-24a^3b$　(8) $9x^3$　(9) $-10x^3y$　(10) a^2

(1) $9a^2\times ab\div(-3b)=-\dfrac{9a^2\times ab}{3b}=-3a^3$

(2) $16x^2\div(-4xy)\times(-y^2)=\dfrac{16x^2\times y^2}{4xy}=4xy$

(3) $-2a^2\times 6b\div(-4ab)=\dfrac{2a^2\times 6b}{4ab}=3a$

(4) $8xy^2\div(-12y)\times 3x=-\dfrac{8xy^2\times 3x}{12y}=-2x^2y$

(5) $12ab\times(-2ab^2)\div(-6a^2b)=\dfrac{12ab\times 2ab^2}{6a^2b}=4b^2$

(6) $-5xy^3\div 10x^3y^2\times 2x^2y^2=-\dfrac{5xy^3\times 2x^2y^2}{10x^3y^2}=-y^3$

(7) $3ab^2\times 4a^2b\div\left(-\dfrac{1}{2}b^2\right)=3ab^2\times 4a^2b\times\left(-\dfrac{2}{b^2}\right)$

$=-\dfrac{3ab^2\times 4a^2b\times 2}{b^2}$

$=-24a^3b$

(8) $x^2\times(-3xy)^2\div xy^2=x^2\times 9x^2y^2\div xy^2$

$=\dfrac{x^2\times 9x^2y^2}{xy^2}$

$=9x^3$

(9) $(-4x)^2\times 5x^4y\div(-2x)^3=16x^2\times 5x^4y\div(-8x^3)$

$=-\dfrac{16x^2\times 5x^4y}{8x^3}$

$=-10x^3y$

(10) $\dfrac{27}{2}ab\div(-3b)^2\times\dfrac{2}{3}ab=\dfrac{27ab}{2}\div 9b^2\times\dfrac{2ab}{3}$

$=\dfrac{27ab}{2}\times\dfrac{1}{9b^2}\times\dfrac{2ab}{3}$

$=\dfrac{27ab\times 1\times 2ab}{2\times 9b^2\times 3}$

$=a^2$

2 解答　(1) $36a^6b^6x^6$　(2) $-x$　(3) $-6ab$　(4) $9x^6y$　(5) $-\dfrac{1}{2}a^6b^5$
(6) x^2y^6

(1) $(-2ab^2x^3)^2\times(-3a^2b)^2=4a^2b^4x^6\times 9a^4b^2$

$=36a^6b^6x^6$

(2) $(-4x^5y^4z^2)\div(2x^2y^2z)^2=-4x^5y^4z^2\div 4x^4y^4z^2$

$=-\dfrac{4x^5y^4z^2}{4x^4y^4z^2}$

$=-x$

(3) $6a^3b\times(-3ab^2)^2\div(-9a^4b^4)=6a^3b\times 9a^2b^4\div(-9a^4b^4)$

$=-\dfrac{6a^3b\times 9a^2b^4}{9a^4b^4}$

$=-6ab$

(4) $-2xy\times(-3x^2y)^3\div 6xy^3=-2xy\times(-27x^6y^3)\div 6xy^3$

$=\dfrac{2xy\times 27x^6y^3}{6xy^3}$

$=9x^6y$

(5) $(a^3b^2)^3\div(2a^4b)^2\times(-2a^5b)=a^9b^6\div 4a^8b^2\times(-2a^5b)$

$=-\dfrac{a^9b^6\times 2a^5b}{4a^8b^2}$

$=-\dfrac{1}{2}a^6b^5$

(6) $(-4xy^3z)^2\times x^2yz\div 16x^2yz^3=16x^2y^6z^2\times x^2yz\div 16x^2yz^3$

$=\dfrac{16x^2y^6z^2\times x^2yz}{16x^2yz^3}$

$=x^2y^6$