

1. (1) $(-24) \div (-4)^2 \times 6 = (-24) \div 16 \times 6$

$$= \frac{-24 \times 6}{16} = -9$$

(2) $2(3x+1) - 3(x-2) = 6x+2-3x+6$

$$= 3x+8$$

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

$$= 3ab$$

(4) $\frac{x-y}{2} - \frac{2x+5y}{3} = \frac{3(x-y) - 2(2x+5y)}{6}$

$$= \frac{3x-3y-4x-10y}{6}$$

$$= \frac{-x-13y}{6}$$

(5) $(2x-3y)(3x+2y) = 6x^2+4xy-9xy-6y^2$

$$= 6x^2-5xy-6y^2$$

(6) $(x-3)^2 - (x+5)(x-4) = (x^2-6x+9) - (x^2+x-20)$

$$= -7x+29$$

(7) $\sqrt{48} \div \sqrt{6} \times \sqrt{2} = \frac{\sqrt{48} \times \sqrt{2}}{\sqrt{6}}$

$$= \frac{4\sqrt{3} \times \sqrt{2}}{\sqrt{6}} = 4$$

(8) $\sqrt{3} - 5\sqrt{2} + 6\sqrt{2} - 3\sqrt{3} = \sqrt{2} - 2\sqrt{3}$

(各 2 点)

2. $2x+3y=9$

$$3y = -2x+9$$

$$y = -\frac{2}{3}x+3$$

(4 点)