

Exercise 4.1

①

1) $x+5$ for $x=4$

$(4)+5 = \boxed{9}$

2) $4y$ for $y=7$

$4(7) = \boxed{28}$

3) $a-7$ for $a=5$

$(5)-7 = \boxed{-2}$

4) $-2b$ for $b=8$

$-2(8) = \boxed{-16}$

5) $10-x$ for $x=9$

$10-9 = \boxed{1}$

6) $8z$ for $z=12$

$8(12) = \boxed{96}$

7) $6x-x = \boxed{5x}$

8) $-12a+3a = \boxed{-9a}$

9) $-2z-5z = \boxed{-7z}$

10) $5t-3t+7t = \boxed{9t}$

11) $-6r-r-7r = \boxed{-14r}$

12) $-6v-7v+15v = \boxed{2v}$

13) $13s-5-s = \boxed{12s-5}$

14) $7x-3+x = \boxed{8x-3}$

15) $-8d-4-4d = \boxed{-12d-4}$

16) $7m-4n+5m = \boxed{12m-4n}$

17) $4s+7t-9s = \boxed{-5s+7t}$

18) $4k+6k-8p = \boxed{10k-8p}$

19) $21m+m-2n+5 = \boxed{22m-2n+5}$

20) $-12k-j-7j+4 = \boxed{-12k-8j+4}$

21) $5h+4-3h+2f = \boxed{2h+4+2f}$

22) $3x^2-2x+4x^2+5 = \boxed{7x^2-2x+5}$

23) $-4x^2+6x-7x-x^2 = \boxed{-5x^2-x}$

24) $3x^2+2x-4 = \boxed{3x^2+2x-4}$ stays the same

25) $2ab^2-ab+3ab^2 = \boxed{5ab^2-ab}$

26) $2ab^2-3a^2b+ab^2 = \boxed{3ab^2-3a^2b}$

27) $5xy^2-xy+3xy^2 = \boxed{8xy^2-xy}$

28) $45xy^2+4xy-12x^2y-7xy^2 = \boxed{38xy^2+4xy-12x^2y}$

29) $5ab^2-3ab+4a^2b-7 = \boxed{5ab^2-3ab+4a^2b-7}$
stays the same

30) $5xy-2x+5y+12-8xy = \boxed{-3xy-2x+5y+12}$

Exercise 4.1 continued

(2)

$$31) 6(x+5) = \boxed{6x+30}$$

$$32) 3(x-2) = \boxed{3x-6}$$

$$33) 7(x+3) = \boxed{7x+21}$$

$$34) -2(x+4) = \boxed{-2x-8}$$

$$35) -3(x+2) = \boxed{-3x-6}$$

$$36) -6(x+5) = \boxed{-6x-30}$$

$$37) -4(3x-2) = \boxed{-12x+8}$$

$$38) -2(-2x-7) = \boxed{4x+14}$$

$$39) -3(5x-7) = \boxed{-15x+21}$$

$$40) 2(x+4) - x = 2x+8-x \\ = \boxed{x+8}$$

$$41) 5(3x-2)+7 = 15x-10+7 \\ = \boxed{15x-3}$$

$$42) 3(x-8)-4 = 3x-24-4 \\ = \boxed{3x-28}$$

$$43) 6+3(2x-7) = 6+6x-21 \\ = \boxed{6x-15}$$

$$44) 3x+2(x+3) = 3x+2x+6 \\ = \boxed{5x+6}$$

$$45) 5+5(2x+1) = 5+10x+5 \\ = \boxed{10x+10}$$

$$46) 5-2(x+1) = 5-2x-2 \\ = \boxed{3-2x}$$

$$47) 3-5(x-2) = 3-5x+10 \\ = \boxed{13-5x}$$

$$48) -x-4(x-1) = -x-4x+4 \\ = \boxed{-5x+4}$$

$$49) 4(x-2)-3(2x+2) = 4x-8-6x-6 \\ = \boxed{-2x-14}$$

$$50) 5(2x+3)-4(5x-5) \\ = 10x+15-20x+20 \\ = \boxed{-10x+35}$$

$$51) 3(x-2)-(-3x+7) \\ = 3x-6+3x-7 \\ = \boxed{6x-13}$$