

Exercises 4.2

①

$$1) \begin{array}{r} x+4=7 \\ -4 \quad -4 \\ \hline x=3 \end{array}$$

Check:

$$(3)+4=7 \\ 7=7 \checkmark$$

$$10) \begin{array}{r} 2x=12 \\ \frac{2}{2} \quad \frac{12}{2} \\ \hline x=6 \end{array}$$

$$\text{Check: } 2(6)=12 \\ 12=12 \checkmark$$

$$2) \begin{array}{r} x+7=17 \\ -7 \quad -7 \\ \hline x=10 \end{array}$$

Check:

$$(10)+7=17 \\ 17=17 \checkmark$$

$$11) \begin{array}{r} 3x=24 \\ \frac{3}{3} \quad \frac{24}{3} \\ \hline x=8 \end{array}$$

$$\text{Check: } 3(8)=24 \\ 24=24 \checkmark$$

$$3) \begin{array}{r} x+8=22 \\ -8 \quad -8 \\ \hline x=14 \end{array}$$

Check:

$$(14)+8=22 \\ 22=22$$

$$12) \begin{array}{r} 5x=45 \\ \frac{5}{5} \quad \frac{45}{5} \\ \hline x=9 \end{array}$$

$$\text{Check: } 5(9)=45 \\ 45=45$$

$$4) \begin{array}{r} x-13=10 \\ +13 \quad +13 \\ \hline x=23 \end{array}$$

Check:

$$(23)-13=10 \\ 10=10 \checkmark$$

$$13) \begin{array}{r} -4x=16 \\ \frac{-4}{-4} \quad \frac{16}{-4} \\ \hline x=-4 \end{array}$$

$$\text{Check: } -4(-4)=16 \\ 16=16 \checkmark$$

$$5) \begin{array}{r} x-4=15 \\ +4 \quad +4 \\ \hline x=19 \end{array}$$

Check:

$$(19)-4=15 \\ 15=15 \checkmark$$

$$14) \begin{array}{r} -7x=42 \\ \frac{-7}{-7} \quad \frac{42}{-7} \\ \hline x=-6 \end{array}$$

$$\text{Check: } -7(-6)=42 \\ 42=42 \checkmark$$

$$6) \begin{array}{r} x-3=7 \\ +3 \quad +3 \\ \hline x=10 \end{array}$$

Check:

$$(10)-3=7 \\ 7=7 \checkmark$$

$$15) \begin{array}{r} -3x=-15 \\ \frac{-3}{-3} \quad \frac{-15}{-3} \\ \hline x=5 \end{array}$$

$$\text{Check: } -3(5)=-15 \\ -15=-15 \checkmark$$

$$7) \begin{array}{r} x+10=-15 \\ -10 \quad -10 \\ \hline x=-25 \end{array}$$

Check:

$$(-25)+10=-15 \\ -15=-15 \checkmark$$

$$16) \begin{array}{r} -4x=-24 \\ \frac{-4}{-4} \quad \frac{-24}{-4} \\ \hline x=6 \end{array}$$

$$\text{Check: } -4(6)=-24 \\ -24=-24 \checkmark$$

$$8) \begin{array}{r} x-3=-10 \\ +3 \quad +3 \\ \hline x=-7 \end{array}$$

Check:

$$(-7)-3=-10 \\ -10=-10 \checkmark$$

$$17) \begin{array}{r} -9x=-72 \\ \frac{-9}{-9} \quad \frac{-72}{-9} \\ \hline x=8 \end{array}$$

$$\text{Check: } -9(8)=-72 \\ -72=-72 \checkmark$$

$$9) \begin{array}{r} x-1=-12 \\ +1 \quad +1 \\ \hline x=-11 \end{array}$$

$$18) \begin{array}{r} -8x=32 \\ \frac{-8}{-8} \quad \frac{32}{-8} \\ \hline x=-4 \end{array}$$

$$\text{Check: } -8(-4)=32 \\ 32=32 \checkmark$$

$$19) \begin{array}{r} x-3=-13 \\ +3 \quad +3 \\ \hline x=-10 \end{array}$$

$$20) \quad \frac{-4x}{-4} = \frac{-16}{-4}$$

$$\boxed{x = 4}$$

$$21) \quad \frac{-2x}{-2} = \frac{-18}{-2}$$

$$\boxed{x = 9}$$

$$22) \quad 5x - 3x = 10$$

$$\frac{2x}{2} = \frac{10}{2}$$

$$\boxed{x = 5}$$

$$23) \quad -4x - 7x = -33$$

$$\frac{-11x}{-11} = \frac{-33}{-11}$$

$$\boxed{x = 3}$$

$$24) \quad -5x + 8x = 27$$

$$\frac{3x}{3} = \frac{27}{3}$$

$$\boxed{x = 9}$$

$$25) \quad 5x = -72 + 47$$

$$\frac{5x}{5} = \frac{-25}{5}$$

$$\boxed{x = -5}$$

$$26) \quad 9x = -42 - 3$$

$$\frac{9x}{9} = \frac{-45}{9}$$

$$\boxed{x = -5}$$

$$27) \quad -3x = 25 - 16$$

$$\frac{-3x}{-3} = \frac{9}{-3}$$

$$\boxed{x = -3}$$

$$28) \quad x - 10x + 12x = 13 - 7$$

$$-9x + 12x = 6$$

$$\frac{3x}{3} = \frac{6}{3}$$

$$\boxed{x = 2}$$

$$29) \quad 4x + 3x - 5x = 54 - 12$$

$$7x - 5x = 42$$

$$\frac{2x}{2} = \frac{42}{2}$$

$$\boxed{x = 21}$$

$$30) \quad 15x - 7x = -12 - 52$$

$$\frac{8x}{8} = \frac{-64}{8}$$

$$\boxed{x = -8}$$

$$31) \quad \frac{2x}{2} = \frac{16}{2}$$

$$\boxed{x = 8}$$

$$32) \quad \frac{x + 20}{-20} = \frac{35}{-20}$$

$$x + 0 = 15$$

$$\boxed{x = 15}$$

$$33) \quad \frac{x \cdot 5}{5} = \frac{55}{5}$$

$$\boxed{x = 11}$$