

3-5-2 Practice with Distribution

$$\begin{aligned} \textcircled{a} \quad 3(2x+5) &= -8 \\ 6x+15 &= -8 \\ \underline{-15 \quad -15} & \\ 6x &= -23 \\ x &= -\frac{23}{6} \\ x &= -\frac{23}{6} \end{aligned}$$

$$\begin{aligned} 9 &= 4(4x-8)+12 \\ 9 &= 16x-32+12 \\ 9 &= 16x-20 \\ \underline{+20 \quad +20} & \\ 29 &= 16x \\ \underline{16 \quad 16} & \\ x &= \frac{29}{16} \end{aligned}$$

$$\begin{aligned} 15 &= 3(4x-8) \\ 15 &= 12x-24 \\ \underline{+24 \quad +24} & \\ 39 &= 12x \\ \underline{12 \quad 12} & \\ \frac{13}{4} &= x \end{aligned}$$

$$\begin{aligned} \textcircled{b} \quad 2(3f+6) &= -9 \\ 6f+12 &= -9 \\ \underline{-12 \quad -12} & \\ 6f &= -21 \\ f &= -\frac{21}{6} \\ f &= -\frac{7}{2} \end{aligned}$$

$$\begin{aligned} 7 &= 5(2r-10)+1 \\ 7 &= 10r-50+1 \\ 7 &= 10r-49 \\ \underline{+49 \quad +49} & \\ 56 &= 10r \\ 5.6 &= r \end{aligned}$$

$$\begin{aligned} 60 &= 60(7t-7) \\ 60 &= 420t-420 \\ \underline{+420 \quad +420} & \\ 480 &= 420t \\ 1\frac{1}{7} &= t \end{aligned}$$

$$\begin{aligned} \textcircled{c} \quad 7(2v+5) &= 0 \\ 14v+35 &= 0 \\ \underline{-35 \quad -35} & \\ 14v &= -35 \\ v &= -\frac{35}{14} \\ v &= -\frac{5}{2} \end{aligned}$$

$$\begin{aligned} 3 &= 14(6b-2)+20 \\ 3 &= 84b-28+20 \\ 3 &= 84b-8 \\ \underline{+8 \quad +8} & \\ 11 &= 84b \\ \frac{11}{84} &= b \end{aligned}$$

$$\begin{aligned} 25 &= 3(8a-4) \\ 25 &= 24a-12 \\ \underline{+12 \quad +12} & \\ 37 &= 24a \\ \frac{37}{24} &= a \end{aligned}$$

$$\begin{aligned} \textcircled{d} \quad 9(3y+6) &= -9 \\ 27y+54 &= -9 \\ \underline{-54 \quad -54} & \\ 27y &= -63 \\ \underline{27 \quad 27} & \\ y &= -\frac{21}{9} \end{aligned}$$

$$\begin{aligned} 14 &= 7(3g-9)+15 \\ 14 &= 21g-63+15 \\ 14 &= 21g-48 \\ \underline{48 \quad +48} & \\ 62 &= 21g \\ \underline{21 \quad 21} & \\ g &= \frac{20}{21} \end{aligned}$$

$$\begin{aligned} 15 &= 3(8-u) \\ 15 &= 24-3u \\ \underline{-24 \quad -24} & \\ -9 &= -3u \\ \underline{-3 \quad -3} & \\ 3 &= u \end{aligned}$$

$$\begin{aligned} \textcircled{e} \quad 15 &= 9-(4x-8) \\ 15 &= 9-4x+8 \\ 15 &= 17-4x \\ \underline{-17 \quad -17} & \\ -2 &= -4x \\ \frac{1}{2} &= x \end{aligned}$$

$$\begin{aligned} 5-(3x-5) &= -10 \\ 5-3x+5 &= -10 \\ -3x+10 &= -10 \\ \underline{-10 \quad -10} & \\ -3x &= -20 \\ \underline{-3 \quad -3} & \\ x &= \frac{20}{3} \end{aligned}$$

$$\begin{aligned} 16 &= -(5-a) \\ 16 &= -5+a \\ \underline{+5 \quad +5} & \\ 21 &= a \\ 21 &= a \end{aligned}$$