Warm-up:

Solve for x: $\dfrac{3}{2}x - 15 = -31$

Home work review 3.1, 3.2

(42) Capacity — 4,756,505 tons
      Currently — 2,896,112 tons
      rate — 1600 $\frac{tons}{day}$

(a)   y = amount in the landfill after
      x = days $\frac{1600 tons}{day} \cdot x$ days
  → y = ____ x ____   1600x tons

  y = amount of trash
      we started with
              +
      trash we've added
      (after x days)

  y = 2896112 + 1600x

(b) 4756505 = 2896112 + 1600x
     -2896112   -2896112
     $\frac{1860393}{1600} = \frac{1600x}{1600}$

                x = 1162/3

(c)   ~1000

Combine Like Terms:

$$9n - 4 + n = 16$$

$$10n - 4 = 16$$
$$ + 4 \quad + 4$$
$$\frac{10n}{10} = \frac{20}{10}$$
$$n = 2$$

Use the Distributive Property:

$$6w + 5(w + {}^-2) = 23$$

$$6w + 5w + {}^-10 = 23$$

$$11w + {}^-10 = 23$$
$$+{}^+10 \quad +{}^+10$$

$$\frac{11w}{11} = \frac{33}{11}$$

$$w = 3$$

Avoid the Distributive Property:

$$\frac{\frac{1}{3}(m + 6)}{\frac{1}{3}} = \frac{4}{\frac{1}{3}}$$

$$m + 6 = 12$$
$$ - 6 \qquad -6$$
$$m = 6$$

$$4 \div \frac{1}{3}$$
$$4 \times \frac{3}{1} = \frac{12}{1} = 12$$

$$\frac{\cancel{17}}{\cancel{8}} \cdot \frac{\cancel{5}}{\cancel{17}}(6m - 11) = \cancel{25}^{5} \cdot \frac{17}{\cancel{8}_1}$$

$$6m - 11 = 85$$

$$6m = 96$$

$$m = 16$$

4. $-31 = 8 + 6p + {}^{-}7p$

$-31 = 8 - 13p$
$-8 \quad -8 \qquad p = 3$
$-39 = -13p \qquad =$

5. $9 + 4(x + 1) = 25$

$9 + 4x \cdot 4 = 25$
$4x + 13 = 25$
$-13 \quad -13$
$4x = 12 \quad x = 3$

6. $7(d - 5) + 12 = 5$

7. $10a + 3(a - 3) = 15$

8. $19a - 3(a - 6) = 66$

9. $\dfrac{4}{1} \cdot \dfrac{1}{4}(x - 8) = 7 \cdot \dfrac{4}{1}$

$x - 8 = 28$
$+8 \quad +8$
$x = 36$

10. $\dfrac{1}{3}(d + 9) = -12$

11. $\dfrac{3}{4}(n + 3) = 9$

12. $-\dfrac{5}{2}(w - 1) = 15$

Homework:
    p. 150, 3 - 54 by 3