

# Homework review 3.1, 3.2

54

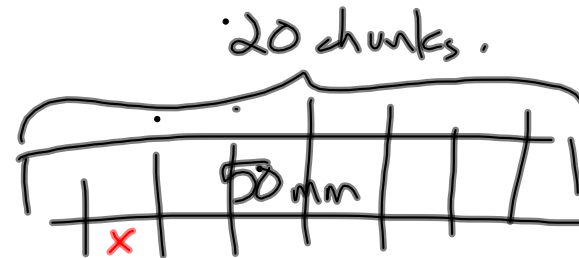
cane is 50 mm

20 pendants

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$x$  = thickness

$$x = \frac{50 \text{ mm}}{20} = 2.5 \frac{\text{mm}}{\text{chunk}}$$



$$\textcircled{30} \quad \frac{x}{3} = 27$$

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

$$x = 81$$

(42) capacity  $\cong 4,500,000$   
 currently  $\cong 3,000,000$   
 cell  $\cong 1,500$

$x = \#$  of days

$y = \text{amount in the landfill}$

amount = how much  
was in there + additional  
garbage

$$y = 3,000,000 + 1500 \text{ tons/day}$$

$$y = 3,000,000 + 1500x$$

$$\begin{array}{r}
 4,500,000 = 3,000,000 + 1500x \\
 -3,000,000 \quad -3,000,000
 \end{array}$$

$$\begin{array}{r}
 1,500,000 = 1500x \\
 \hline
 1500 \qquad 1500
 \end{array}$$

$$1000 = x$$

Warm-up - Find x:

$$\frac{3}{2}x - 15 = -31$$

$+15 \quad +15$

$$\frac{\frac{3}{2}x}{\frac{3}{2}} = \frac{-16}{\frac{3}{2}}$$

$$x = \frac{-32}{3}$$

$$-16 \div \frac{3}{2}$$
$$\frac{-16}{1} \cdot \frac{2}{3} = \frac{-32}{3}$$

## Solving Multi-Step Equations:

$$\underline{9n} - 4 + \underline{1n} = 16 \quad \text{Combine Like Terms}$$


$$10n - 4 = 16$$

$$+4 \quad +4$$

$$\frac{10n}{10} = \frac{20}{10}$$

$$n = 2$$

## Solving Multi-Step Equations:

$$6w + 5(w - 2) = 23$$


Use the distributive property

$$6w + 5w - 10 = 23$$

$$11w - 10 = 23$$

$$+ 10 \quad + 10$$

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

$$w = 3$$

## Solving Multi-Step Equations:

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

$$\begin{array}{r} m + 6 = 12 \\ -6 \quad -6 \\ \hline m = 6 \end{array}$$

Avoid the distributive property

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

$$\frac{4}{1} \cdot \frac{3}{1} = 12$$

Example:  $\frac{\cancel{17} \cdot 5}{\cancel{8} \cdot 17} (6m - 11) = \frac{\cancel{5} \cdot 17}{1 \cdot \cancel{8} \cdot 1} \cdot \frac{17}{81}$

$$\begin{array}{r} 6m - 11 = 85 \\ +11 \quad +11 \\ \hline 6m = 96 \\ \hline 6 \quad 6 \\ m = 16 \end{array}$$

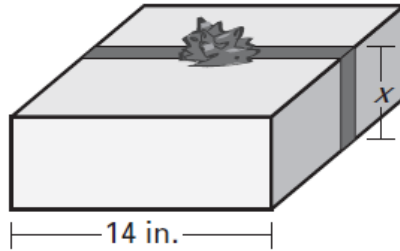


**4.**  $-31 = 8 - 6p - 7p$

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

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

**Wrapping a Package** It takes 70 inches of ribbon to make a bow and wrap the ribbon around a box. The bow takes 32 inches of ribbon. The width of the box is 14 inches. What is the height of the box?



ribbon = 70 inches  
bow = 32 inches  
width = 14 inches  
height = x inches

$$\begin{array}{r} 2(x+14) + 32 = 70 \\ -32 \quad -32 \\ \hline 2(x+14) = 38 \\ \hline \end{array}$$

$$\begin{array}{r} x + 14 = 19 \\ -14 \quad -14 \\ \hline x = 5 \end{array}$$

Homework:  
p. 150, 3 - 54 by 3