1. Solve for w: $2(v - 3) = 1 - (w + 4)$
   \[ w = -2v + 3 \]

2. Solve the system of equations using any method:
   \[
   \begin{align*}
   4x + 3y &= 22 \\
   x - 2y &= 0
   \end{align*}
   \]
   \[(4, 2)\]

3. You have decided to give your best friend a bag of red and green marbles for his birthday. You friend likes green marbles better than red ones, so the bag contains twice as many green marbles as red. The label on the bag says it contains 84 marbles. How many of each type of marble is in the bag?
   \[
   \begin{align*}
   g &= 2r \\
   g + r &= 84
   \end{align*}
   \]
   28 red marbles, 56 green marbles

4. The cafeteria sold pizza slices and burritos. The number of pizza slices sold was 20 less than twice the number of burritos sold. Pizza sold for $2.50 a slice and burritos sold for $3.00 each. The cafeteria collected a total of $358 for selling these two items. How many of each were sold?
   \[
   \begin{align*}
   2.50p + 3b &= 358 \\
   p &= 2b - 20
   \end{align*}
   \]
   82 pizza slices, 51 burritos

5. Solve the system of equations using any method:
   \[
   \begin{align*}
   4x + 3y &= 10 \\
   9x - 4y &= 1
   \end{align*}
   \]
   \[(1, 2)\]

6. Anaya enlarged figure A so that it was similar to figure B. Her diagram is shown at right.
   a. What is the scale factor? 2.5
   b. What is the value of $x$? 17.5 mm
7. Complete a flowchart to justify the relationship between the two triangles. Then determine the length of DF.

- $AB = 14$ (Given)
- $EF = 14$ (Given)
- $\angle C = 39^\circ$ (Given)
- $\angle D = 39^\circ$ (Given)

\[ \triangle ABC \cong \triangle EFD \] (AAS)

8. $M$ is the midpoint of both $\overline{KQ}$ and $\overline{PL}$.

Demonstrate that the two triangles are congruent by using a flowchart.

- $M$ is the midpoint of $\overline{KQ}$ and $\overline{PL}$ (Given)
- $KM = QM$ (Def of MP)
- $PM = LM$ (Def of MP)
- $\angle KML \cong \angle QMP$ (Vertical Angles)

\[ \triangle KML \cong \triangle QMP \] (SAS)
9. Solve: \[2|x - 6| = 18\]

\[x = 15 \text{ or } -3\]

10. Solve each inequality and graph your solution on a number line.

a. \[5(x - 3) - 6x < 12\]

\[x > -27\]

b. \[|2x - 1| \geq 5\]

\[x \leq -2 \text{ or } x \geq 3\]

11. Graph the points \(A(0, 3), B(0, 6), C(3, 6),\) and \(D(5, 1)\).

What is the perimeter?

\[3 + 3 + \sqrt{29} + \sqrt{29} \approx 16.8 \text{ units}\]

What is the area?

\[15 \text{ sq. units}\]

Describe all the relationships that exist between the diagonals \((\overline{AC} \text{ and } \overline{BD})\).

\[\overline{AC} \perp \overline{BD}, \overline{BD} \text{ bisects } \overline{AC}\]

What type of special quadrilateral is it? \(ABCD\) is a kite

12. Graph the system of inequalities:

\[y > 3x - 6\]

\[y \leq \frac{1}{2}x + 1\]
13. The equation of the exponential function that contains (1, 6) and (4, 162).

\[ y = 2 \cdot 3^x \]

14. Mr. Kong has a block of ice that weighs 60 grams and is melting at 5% an hour. How much will remain solid after 8 hours?

\[ 60 \cdot (0.95)^8 = 39.8 \text{ g} \]

15. A survey of 155 recent high school graduates found that 130 had driver’s licenses and 58 had jobs. Twenty-one said they had neither a driver’s license nor a job. Is there an association between having a driver’s license and a job among the recent graduates?

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93% of people with jobs have a license while 78% of people with no job have license. There is an association between having a job and having a license.