1. \( b \geq 5 \)

2. \( y \leq 10 \)

3. \[ |14 + (-2)| - |-16| \]
   
   \[ |12| - 16 \]
   
   \[ 12 - 16 \]
   
   \[ -4 \]
\[
\begin{align*}
\delta &= \left| -43 - 16 \right| \\
\delta &= \left| -59 \right| \\
\delta &= 59
\end{align*}
\]
\[ \begin{align*}
2x - 4x &= \chi \\
2(3)^2 - 4(3) &= 2 \cdot 9 - 12 \\
18 - 12 &= 6
\end{align*} \]
\[ \chi = 3 \]
\[ \begin{align*} &- \textcircled{2} + 2x - 1 \\
&\quad - (-1)^2 + 2(-1) - 1 \\
&\quad - 1 - 2 - 1 \\
&\quad -4 \\
&x = -1 \\
&\quad (-2)^2 = 4 \\
&\quad -2^2 = -4 \end{align*} \]
6\[3[x + (-1)] = 3x + 3(-1)\]

7. \((-2)(3^2)(2^3)\)

\[
\frac{1}{6^2} \cdot 2^3 = \frac{8}{36} = \frac{2}{9}
\]
\[(2^3)^{-3} = 2^{3 \cdot -3} = 2^{-9} = \frac{1}{2^9} = \frac{2^3}{2^9} = 1\]
8. \[ 3x - x^2 \]

\[ 3 - (4)^{-2} \]

\[ 3 - \frac{1}{4^2} \]

\[ 3 - \frac{1}{16} \]

\[ \frac{48}{16} - \frac{1}{16} = \frac{47}{16} \]

9. \[ (-a^2 b^3)(-3a^3 b^3) \]

\[ 2a^5 b^6 \]

\[ -2a^5 b^6 (-27) \]

54a^5 b^6
\[\frac{1}{(27)^{-\frac{1}{3}}} \rightarrow 27^{\frac{1}{3}} \quad \frac{1}{\left(\frac{3^3}{3}\right)^{\frac{1}{3}}} \rightarrow \frac{3}{3}^{\frac{1}{3}} \quad \frac{1}{3^{-1}} \]
\[ \sqrt{75x^2 - 4} \]

\[ \sqrt{\frac{75x^2}{y^4}} \]

\[ \frac{75x^2}{\sqrt{y^4}} \]

\[ \frac{\sqrt{75x^2}}{\sqrt{y^4}} \]

\[ \frac{25 \cdot \sqrt{x^2}}{\sqrt{y^4}} \]

\[ \frac{5|x|\sqrt{3}}{\sqrt{y^4}} \]

\[ \frac{5|x|\sqrt{3}}{1y \cdot |y|} \]

\[ \frac{5|x|\sqrt{3}}{y^2} \]

\[ P16 \]

\[ \text{Property of Rad} \]

\[ \text{even} \]

\[ \sqrt{3^2} |a| \]

\[ \text{odd} \]

\[ \sqrt{a^n} \]

\[ |{-3}| = 3 \]

\[ \sqrt{a^3} = 2 \]

\[ \sqrt{a^3} = 2 \]
\[
\frac{2}{\sqrt[3]{2x}} \cdot \frac{\sqrt[3]{2x}}{\sqrt[3]{2x}} = \frac{2\sqrt[3]{2x^2}}{\sqrt[3]{2x^3}} = \frac{2\sqrt[3]{2x^2}}{2x} = \frac{\sqrt[3]{2x^2}}{x}
\]
\[
\frac{3}{\sqrt{7} + 2} \cdot \frac{(\sqrt{7} - 2)}{(\sqrt{7} - 2)} = \frac{3(\sqrt{7} - 2)}{7 - 4} = \frac{3(\sqrt{7} - 2)}{3} = \sqrt{7} - 2
\]
\[
\frac{5}{3 - \sqrt{6}} \cdot \frac{3 + \sqrt{6}}{3 + \sqrt{6}} = \frac{5(3 + \sqrt{6})}{9 - 6} = \frac{5(3 + \sqrt{6})}{3}
\]

\[
= \frac{15 + 5 \sqrt{6}}{3}
\]

\[
= \frac{15}{3} + \frac{5 \sqrt{6}}{3} = 5 + \frac{5 \sqrt{6}}{3}
\]
\[ \sqrt[3]{2x} \]

\[ \sqrt{2x} \]
\[ \sqrt{8xy^3} \]
\[ \sqrt{2^3} \cdot \sqrt{xy} \]
\[ \sqrt{a^2} \cdot \sqrt{xy} \]
\[ \sqrt{a^2xy} \]

\[ \rightarrow (2^3 \cdot 3^3 \cdot 3)^{1/6} \]
\[ = 2 \cdot x \cdot y^{1/2} \]
\[ = \sqrt[12]{a^2xy} \]
1

3.75 \times 10^{-7}

0.000000375