3.3 Practice A

In Exercises 1 and 2, find the value of $x$ that makes $s \parallel t$. Explain your reasoning.

1. \[
\begin{align*}
3(\alpha - 8)^\circ & \quad 2(\beta + 10)^\circ \\
\end{align*}
\]

2. \[
\begin{align*}
(4\alpha - 12)^\circ & \quad 120^\circ \\
\end{align*}
\]

In Exercises 3 and 4, decide whether there is enough information to prove that $p \parallel q$. If so, state the theorem you would use.

3. \[
\begin{align*}
p & \quad q \\
\end{align*}
\]

4. \[
\begin{align*}
p & \quad q \\
\end{align*}
\]

5. Describe and correct the error in the reasoning.

Conclusion: $m \parallel n$

6. Given: $\angle 1$ and $\angle 2$ are supplementary

Prove: $p \parallel q$

7. The angles formed between the braces and the wings of a biplane are shown in the figure. Are the top and bottom wings of a biplane parallel? Explain your reasoning.
3.3 Practice B

In Exercises 1 and 2, find the value of $x$ that makes $s\parallel t$. Explain your reasoning.

1. \[ (7x - 20)° \]
   \[ (4x + 16)° \]

2. \[ 2(x + 15)° \]
   \[ (3x + 20)° \]

In Exercises 3 and 4, decide whether there is enough information to prove that $p\parallel q$. If so, state the theorem you would use.

3.

4.

5. The map of the United States shows the lines of latitude and longitude. The lines of latitude run horizontally and the lines of longitude run vertically.
   a. Are the lines of latitude parallel? Explain.
   b. Are the lines of longitude parallel? Explain.

6. Use the diagram to answer the following.

7. Given: $\angle 1 \cong \angle 2$ and $\angle 2 \cong \angle 3$
   Prove: $\angle 1 \cong \angle 4$

   a. Find the values of $x, y,$ and $z$ that makes $p\parallel q$ and $q\parallel r$. Explain your reasoning.
   b. Is $p\parallel r$? Explain your reasoning.