The acceleration of each object in a system is the same as the acceleration of the system.

Can switch the bricks positions and it will not affect the acceleration of the system (or the individual bricks)
The tension on a string is the same everywhere on the string.
\[ a_2 = a_1 = a \]
\[ a = \frac{T}{2k_3} \]
\[ a = \frac{\sum F_2}{M_2} \]
\[ a_1 = \frac{\sum F_1}{m_1} \]
\[ \alpha = \frac{(12N + (-T))}{1k_3} \]
Problem 2

\[ a = \frac{-F_2 + T_1}{m_1} \]
\[ a = \frac{-T_1 + T_2}{m_2} \]
\[ a = \frac{-T_2 + F_1}{m_3} \]
Pulleys

2 kg
\( F_{g2} \)

1 kg
\( F_{g1} \)

\( T \)

\( T \)

(2)
\( T \)
\( F_{g2} \)

(1)
\( -T \)
\( F_{g1} \)