### 23rd April

#### Simplify fully

\[
\frac{1}{3x^2 - x - 14} \div \frac{1}{2x^2 - x - 10}
\]

#### The area of ABC is 22.981 cm²

Calculate the length of AB

#### Given

\[ f(x) = \frac{1}{2x + 1} \]

Find \( f(3) \)

#### Write down a value of x for which \( f(x) \) is not defined.

#### By using completing the square, find the coordinates of the turning point of the curve with equation \( y = x^2 - 12x - 3 \)

#### The first 5 terms in a quadratic sequence are:

\[ 8 \quad 11 \quad 16 \quad 23 \quad 32 \]

Find the first term in the sequence which is greater than 400