UNIT 3 - **SOLVING EQUATIONS** $\frac{}{30}K$ $\frac{}{16}A$ $\frac{-}{6}T$ $\frac{-}{6}C$

1) Solve each of the following for the variable. (30K)

A) $\frac{4x+1}{3}=-5$

B) $\frac{3x-1}{5}=\frac{4x+1}{9}$

C) $-5x+3=18$

D) $4x+3=x-6$

E) $3\,(2\,x+4)=\ 2\,(\,x+2)$

F) $\frac{2x}{7}=4$

G) $\frac{1}{3}(6x+12)=-8$

H) $3\left(2x-4\right)=12$

PART B -APPLICATIONS

1) The perimeter of an isosceles triangle is 42 cm. The length of each equal side is triple the length of the base.

a) Write an equation to represent this situation? (3A)

b) Find the length of all three sides of the triangle? (3A)

2) Chad earns $2.00 per hour more than James and $1.50 per hour less than Alexis. Together, they all earn $26.50 per hour.

a) Write an equation to represent this situation? (3A)

b)What is each person's hourly wage? (3A)

3) A rectangle has a width that is 33cm less than its length. The perimeter of the rectangle is 822cm. What is the length and width of the rectangle? (4A)

PART 3 - TIPS (6T)

An equilateral triangle with a side length represented by the expression $x+4$ and a rectangle with a width represented by the expression $x+3$ and a length represented by the expression $x+1$, have the same perimeter.
Find the side lengths of the triangle and the length and width of the rectangle.

PART 4- COMMUNICATION (6C)

Use words to explain the steps required to solve the following problem. DO NOT SOLVE

$$\frac{2(x-5)}{4}=6$$