For problems #1-3, factor each expression by grouping.

1. $8x^{2}-14x+12x-21$

1. $8a^{2}+16a-3a-6$
2. $10y^{2}-2y+25y-5$

For problems #4-7, factor each trinomial.

1. $2x^{2}-21x+49$
2. $16a^{2}-24a+9$
3. $5x^{2}+45x+90$
4. $30y^{2}+34y-8$

For problems #8-10, each expression represents the area of a rectangle or square. Factor each polynomial to find the expressions that represent the length and width of each figure.

1. $(6x^{2}+23x+10)$ square inches
2. $(3x^{2}+22x-16)$ square feet
3. $(10x^{2}-21x+9)$ square meters