$$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$$

Solve each equation with the quadratic formula.

10) $5r^2 + 6r - 27 = 0$ (with labels a, b, c above terms)

$$x = \frac{-6 \pm \sqrt{6^2 - (4 \cdot 5 \cdot -27)}}{2(5)}$$

$$x = \frac{-6 \pm \sqrt{36 - ^-540}}{10}$$

$$x = \frac{-6 \pm \sqrt{576}}{10}$$

$$x = \frac{-6 \pm 24}{10}$$

$$x = \frac{-6+24}{10} \qquad x = \frac{-6-24}{10}$$

$$= \frac{18}{10} \qquad\qquad = \frac{-30}{10}$$

$$= \boxed{\frac{4}{5}} \qquad\qquad = \boxed{-3}$$

11) $2n^2 + n - 19 = -9$
$ +9 +9$

$2n^2 + n - 10 = 0$ $\boxed{a=2, b=1, c=-10}$

$$x = \frac{-1 \pm \sqrt{1^2 - (4 \cdot 2 \cdot -10)}}{2(2)}$$

$$x = \frac{-1 \pm \sqrt{1 - ^-80}}{4}$$

$$x = \frac{-1 \pm \sqrt{81}}{4}$$

$$x = \frac{-1 \pm 9}{4}$$

$$x = \frac{-1+9}{4} \qquad x = \frac{-1-9}{4}$$

$$ \qquad\qquad = \frac{-10}{4}$$

$$= \frac{8}{4}$$

$$= \boxed{2} \qquad\qquad = \boxed{-\frac{5}{2}}$$

12) $5v^2 + 10v + 7 = 0$ (with labels a, b, c)

$$x = \frac{-10 \pm \sqrt{10^2 - (4 \cdot 5 \cdot 7)}}{2(5)}$$

$$x = \frac{-10 \pm \sqrt{100 - 140}}{10}$$

$$x = \frac{-10 \pm \sqrt{-40}}{10}$$

$$x = \frac{-10 \pm \sqrt{-4 \cdot 10}}{10}$$

$$x = \frac{-10 \pm 2i\sqrt{10}}{10}$$

$$\boxed{x = \frac{-5 \pm i\sqrt{10}}{5}}$$

13) $2a^2 + 21 = 12$
$ -12 -12$

$2a^2 + 9 = 0$ $\boxed{a=2 \quad b=0 \quad c=9}$

$$x = \frac{-0 \pm \sqrt{0^2 - (4 \cdot 2 \cdot 9)}}{2(2)}$$

$$x = \frac{0 \pm \sqrt{0 - 72}}{4}$$

$$x = \frac{0 \pm \sqrt{-72}}{4}$$

$$x = \frac{0 \pm \sqrt{-36 \cdot 2}}{4}$$

$$x = \frac{0 \pm 6i\sqrt{2}}{4}$$

$$x = \frac{\pm 6i\sqrt{2}}{4}$$

$$\boxed{x = \frac{\pm 3i\sqrt{2}}{2}}$$