



Solve:

$$7r^2 - r - 20 = 6r^2$$

$$\begin{array}{r} 7r^2 - r - 20 = 6r^2 \\ -6r^2 \qquad \qquad -6r^2 \\ \hline \end{array}$$

$$r^2 - r - 20 = 0$$

$$\begin{array}{r} \begin{array}{c} -20 \\ \diagup \quad \diagdown \\ r \qquad r \\ -5 \qquad 4 \\ \diagdown \quad \diagup \\ -1 \end{array} \end{array}$$

$$\begin{array}{r} -20 \\ -5 \overline{) 4} \end{array}$$

$$(r-5)(r+4) = 0$$

$$r-5=0 \quad r+4=0$$

$$r=5 \quad r=-4$$

$$\boxed{5, -4}$$

Solve:

$$n^2 - 5n + 3 = 3$$

$$\begin{array}{r} n^2 - 5n + 3 = 3 \\ -3 \quad -3 \\ \hline \end{array}$$

$$n^2 - 5n = 0$$

$$n(n-5) = 0$$

$$\boxed{n=0} \quad n-5=0$$

$$\boxed{n=5}$$

$$\boxed{0, 5}$$

Solve:  $4p^2 + 48 = 14p + 3p^2$

$4p^2 - 3p^2 + 48 - 14p = 0$

$p^2 - 14p + 48 = 0$

~~$$\begin{array}{r} 48 \\ -6 \quad p \quad -8 \\ \hline -14 \quad p \end{array}$$~~

$$\begin{array}{r} 48 \\ 6 \overline{) 8} \\ -6 \quad -8 \end{array}$$

$(p-6)(p-8) = 0$

$p-6=0$

$p-8=0$

$p=6$

$p=8$

$\boxed{6, 8}$

Solve:  $32x^2 + 80x + 25 = -25$

$32x^2 + 80x + 25 + 25 = 0$

$32x^2 + 80x + 50 = 0$

$$\begin{array}{ccc} \wedge & \wedge & \wedge \\ 48 & 108 & 105 \\ \wedge & \wedge & \wedge \\ 22 & 52 & 52 \\ \wedge & \wedge & \wedge \\ 2 & 2 & 2 \\ 2 & 2 & 2 \end{array}$$

$32x^2 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot x$

$80x = 2 \cdot 2 \cdot 2 \cdot 5 \cdot x$

$50 = 2 \cdot 5 \cdot 5$

$2(16x^2 + 40x + 25) = 0$

~~$$\begin{array}{r} 400 \\ 20 \overline{) 16x} \\ 40 \\ 20 \overline{) 40x} \\ 20 \quad 5 \end{array}$$~~

$$\frac{400}{20} = 20 = 40$$

$2(4x+5)(4x+5) = 0$

OR

$2(4x+5)^2 = 0$

$2 \neq 0 \quad 4x+5 = 0$

$$\frac{4x}{4} = \frac{-5}{4} \quad \boxed{x = \frac{-5}{4}}$$

**Solve: -**