What Do You Call It When Somebody Spends 20 Years in the 24th Row of a Theater?

Solve each equation below using the quadratic formula. Find the solution set at the bottom of the page and print the letter of the exercise above it.

(I) $2x^2 - 7x + 5 = 0$ $x = \frac{7 \pm \sqrt{49-40}}{4}$ $x = \frac{5}{2}, 1$

(N) $2x^2 + x - 6 = 0$ $x = \frac{-1 \pm \sqrt{1-(-48)}}{4}$ $x = \frac{3}{2}, -2$

(S) $3n^2 - 2n - 5 = 0$ $n = \frac{2 \pm \sqrt{4-(-60)}}{6}$ $= \frac{5}{3}, -1$

(A) $w^2 + 7w + 4 = 0$ $w = \frac{-7 \pm \sqrt{49-16}}{2}$

(I) $5x^2 + 3x - 3 = 0$ $x = \frac{-3 \pm \sqrt{9-(-60)}}{10}$

(G) $6x^2 - x = 2$ $6x^2 - x - 2 = 0$ $x = \frac{1 \pm \sqrt{1-(-48)}}{12}$ $x = \frac{2}{3}, -\frac{1}{2}$

(E) $2y^2 + 2 = 9y$ $2y^2 - 9y + 2 = 0$ $y = \frac{9 \pm \sqrt{81-16}}{4}$

(I) $x^2 - 6x + 4 = 0$ $x = \frac{6 \pm \sqrt{36-16}}{2}$

(L) $t^2 + 4t - 2 = 0$ $t = \frac{-4 \pm \sqrt{16-(-8)}}{2}$

(N) $3x^2 + 10x + 5 = 0$ $x = \frac{-10 \pm \sqrt{100-60}}{6}$

(V) $4x^2 - 3x = 1$ $4x^2 - 3x - 1 = 0$ $x = \frac{3 \pm \sqrt{9-(-16)}}{8}$ $x = 1, -\frac{1}{4}$

(L) $2d^2 + 4 = 5d$ $2d^2 - 5d + 4 = 0$ $d = \frac{5 \pm \sqrt{25-32}}{4}$

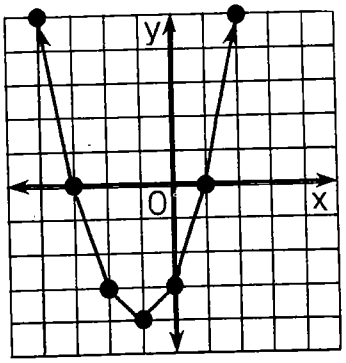
(X) $2x = 7 - x^2$ $x^2 + 2x - 7 = 0$ $x = \frac{-2 \pm \sqrt{4-(-28)}}{2}$

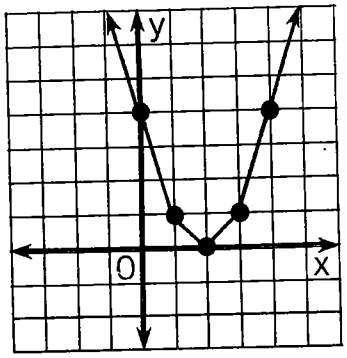
(I) $y^2 + 9 = -9y$ $y^2 + 9y + 9 = 0$ $y = \frac{-9 \pm \sqrt{81-36}}{2}$

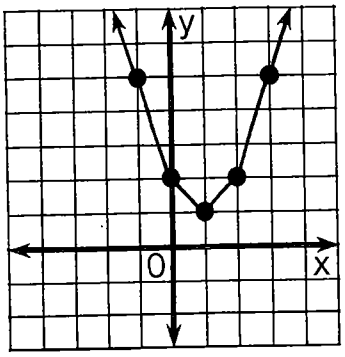
L	I	V	I	N	G		I	N		X		A	I	S	L	E
$\left\{\frac{-4 \pm \sqrt{24}}{2}\right\}$	$\left\{\frac{-3 \pm \sqrt{99}}{10}\right\}$	$\left\{1, -\frac{1}{4}\right\}$	$\left\{\frac{6 \pm \sqrt{20}}{2}\right\}$	$\left\{3, -\frac{2}{2}\right\}$	$\left\{\frac{2}{3}, -\frac{1}{2}\right\}$	$\{-1 \pm \sqrt{45}\}$	$\left\{\frac{5}{2}, 1\right\}$	$\left\{\frac{-10 \pm \sqrt{40}}{6}\right\}$	$\left\{\frac{-9 \pm \sqrt{30}}{2}\right\}$	$\left\{\frac{-2 \pm \sqrt{32}}{2}\right\}$	$\left\{2, -\frac{3}{2}\right\}$	$\left\{\frac{-7 \pm \sqrt{33}}{2}\right\}$	$\left\{\frac{-9 \pm \sqrt{45}}{2}\right\}$	$\left\{\frac{5}{3}, -1\right\}$	no solution	$\left\{\frac{9 \pm \sqrt{65}}{4}\right\}$

How Can You Help Control Soil Erosion?

Use the related graph or the discriminant of each equation to determine how many real-number solutions it has. Circle the letter of the correct choice and write this letter in the box containing the exercise number.







(1) $x^2 + 2x - 3 = 0$
(D) two solutions
(E) one solution
(M) no solutions

(2) $x^2 - 4x + 4 = 0$
(C) two solutions
(A) one solution
(W) no solutions

(3) $x^2 - 2x + 2 = 0$
(H) two solutions
(D) one solution
(O) no solutions

discriminant ⇒ $b^2 - 4ac$

	two solutions	one solution	no solutions
(4) $x^2 + 5x + 4 = 0$ $5^2 - 16 = 9$	(K)	B	G
(5) $x^2 - 3x = 2$ $x^2 - 3x - 2 = 0$ $3^2 + 8 = 17$	(U)	O	A
(6) $y^2 + 10y + 25 = 0$ $10^2 - 100 = 0$	V	(A)	I
(7) $2x^2 = 4x - 3$ $2x^2 - 4x + 3 = 0$ $4^2 - 24 = -8$	F	C	(H)
(8) $4x^2 + 9 = 12x$ $4x^2 - 12x + 9 = 0$ $12^2 - 144 = 0$	S	(P)	N
(9) $-3n^2 + 5n - 2 = 0$ $5^2 - 24 = 1$	(N)	R	S
(10) $\frac{1}{2}x^2 + 3x + 8 = 0$ $3^2 - 16 = -7$	R	P	(L)
(11) $\frac{1}{3}t^2 + 3 = 2t$ $(-2)^2 - 4 = 0$	Y	(B)	T

7	3	10	1	5	8	2	11	6	9	4
H	O	L	D	U	P	A	B	A	N	K

OBJECTIVE 4–f: To use the related graph or the discriminant of a equation to determine how many real-number solutions it has.