Difficulty level: Beginner

1. Solve for x in the equation $x^2 - 14x + 85 = 0$.

- ○ $x = 7 - 6i,\ 7 + 6i$
- ○ $x = -7 - 6i,\ -7 + 6i$
- ○ $x = -14 - 12i,\ -14 + 12i$
- ○ $x = 14 - 12i,\ 14 + 12i$

2. Solve for x: $7x^2 - 56x + 455 = 0$.

- ○ $x = -8 - 14i,\ -\frac{8}{7} + 2i$
- ○ $x = \frac{8}{7} + 2i,\ 8 - 14i$
- ○ $x = 4 - 7i,\ 4 + 7i$
- ○ $x = -4 + 7i,\ \frac{1}{14}\left(-56 - 2i\sqrt{3199}\right)$

3. Solve for q in the equation $-5q^2 + 10q - 25 = 0$.

- ○ $q = 1 - 2i,\ 1 + 2i$
- ○ $q = -1 - 2i,\ \frac{1}{10}\left(-10 + 7i\sqrt{10}\right)$
- ○ $q = -\frac{2}{5} + \frac{4i}{5},\ 2 + 4i$
- ○ $q = -2 + 4i,\ \frac{2}{5} + \frac{4i}{5}$

4. Solve for x in the equation $-5x^2 + 40x - 160 = 0$.

- ○ $x = -4 - 4i,\ \frac{1}{10}\left(-40 + 2i\sqrt{790}\right)$
- ○ $x = -8 + 8i,\ \frac{8}{5} + \frac{8i}{5}$
- ○ $x = -\frac{8}{5} + \frac{8i}{5},\ 8 + 8i$
- ○ $x = 4 - 4i,\ 4 + 4i$

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5. Solve for y: $-y^2+14y-58=0$.

- ○ $y=-7-3i,\ -7+3i$
- ○ $y=7-3i,\ 7+3i$
- ○ $y=-14+6i,\ 14+6i$
- ○ $y=-14+6i,\ 14+6i$

6. Solve for u in the equation $3u^2-12u+120=0$.

- ○ $u=\frac{4}{3}+4i,\ 4-12i$
- ○ $u=-2-6i,\ -2+6i$
- ○ $u=2-6i,\ 2+6i$
- ○ $u=-4-12i,\ -\frac{4}{3}+4i$

7. Solve for m: $2m^2-24m+74=0$.

- ○ $m=6+i,\ 12-2i$
- ○ $m=-12-2i,\ -6+i$
- ○ $m=-6+i,\ \frac{1}{4}\left(-24-2i\sqrt{154}\right)$
- ○ $m=6-i,\ 6+i$

8. Solve for x: $6x^2-12x+30=0$.

- ○ $x=1-2i,\ 1+2i$
- ○ $x=-2-4i,\ -\frac{1}{3}+\frac{2i}{3}$
- ○ $x=-1-2i,\ -1+2i$
- ○ $x=\frac{1}{3}+\frac{2i}{3},\ 2-4i$

9. Solve for x: $4x^2-48x+208=0$.

- ○ $x=-12-8i,\ -3+2i$
- ○ $x=-6-4i,\ -6+4i$
- ○ $x=3+2i,\ 12-8i$
- ○ $x=6-4i,\ 6+4i$

10. Solve for u in the equation $u^2-14u+53=0$.

- ○ $u=-14-4i,\ -14+4i$
- ○ $u=-7-2i,\ -7+2i$
- ○ $u=7-2i,\ 7+2i$
- ○ $u=14-4i,\ 14+4i$

11. Solve for x: $4x^2 - 56x + 392 = 0$.

- ○ $x = -14 - 14i,\ -\frac{7}{2} + \frac{7i}{2}$
- ○ $x = \frac{7}{2} + \frac{7i}{2},\ 14 - 14i$
- ○ $x = 7 - 7i,\ 7 + 7i$
- ○ $x = -7 - 7i,\ -7 + 7i$

12. Solve for y: $7y^2 - 70y + 238 = 0$.

- ○ $y = -5 - 3i,\ -5 + 3i$
- ○ $y = -10 - 6i,\ -\frac{10}{7} + \frac{6i}{7}$
- ○ $y = \frac{10}{7} + \frac{6i}{7},\ 10 - 6i$
- ○ $y = 5 - 3i,\ 5 + 3i$

13. Solve for x in the equation $3x^2 - 18x + 102 = 0$.

- ○ $x = 2 + \frac{10i}{3},\ 6 - 10i$
- ○ $x = -6 - 10i,\ -2 + \frac{10i}{3}$
- ○ $x = 3 - 5i,\ 3 + 5i$
- ○ $x = -3 + 5i,\ \frac{1}{6}\left(-18 - 3i\sqrt{138}\right)$

14. Solve for y in the equation $-y^2 + 10y - 29 = 0$.

- ○ $y = 5 - 2i,\ 5 + 2i$
- ○ $y = -10 + 4i,\ 10 + 4i$
- ○ $y = -10 + 4i,\ 10 + 4i$
- ○ $y = -5 - 2i,\ \frac{1}{2}\left(-10 + i\sqrt{106}\right)$

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15. Solve for x in the equation $-2x^2+12x-26=0$.

- $x=3-2i,\ 3+2i$
- $x=-6+4i,\ 3+2i$
- $x=-3-2i,\ -3+\frac{7i}{2}$
- $x=-3+2i,\ 6+4i$

16. Solve for y: $6y^2-60y+444=0$.

- $y=-10-14i,\ -\frac{5}{3}+\frac{7i}{3}$
- $y=\frac{5}{3}+\frac{7i}{3},\ 10-14i$
- $y=5-7i,\ 5+7i$
- $y=-5+7i,\ \frac{1}{12}\left(-60-2i\sqrt{2679}\right)$

17. Solve for x: $4x^2-8x+8=0$.

- $x=-1+i,\ \frac{1}{8}\left(-8-2i\sqrt{34}\right)$
- $x=1-i,\ 1+i$
- $x=-2-2i,\ -\frac{1}{2}+\frac{i}{2}$
- $x=\frac{1}{2}+\frac{i}{2},\ 2-2i$

18. Solve for x: $-7x^2+28x-371=0$.

- $x=-2-7i,\ -2+7i$
- $x=-\frac{4}{7}+2i,\ 4+14i$
- $x=2-7i,\ 2+7i$
- $x=-4+14i,\ \frac{4}{7}+2i$

19. Solve for v: $5\,v^2-60\,v+200=0$.

- $v=-6+2\,i,\ \frac{1}{10}\left(-60-2\,i\,\sqrt{1015}\right)$
- $v=-12-4\,i,\ -\frac{12}{5}+\frac{4\,i}{5}$
- $v=6-2\,i,\ 6+2\,i$
- $v=\frac{12}{5}+\frac{4\,i}{5},\ 12-4\,i$

20. Solve for x in the equation $-4\,x^2+8\,x-8=0$.

- $x=1-i,\ 1+i$
- $x=-1-i,\ \frac{1}{8}\left(-8+2\,i\,\sqrt{30}\right)$
- $x=-\frac{1}{2}+\frac{i}{2},\ 2+2\,i$
- $x=-2+2\,i,\ \frac{1}{2}+\frac{i}{2}$