

### A2.A.22: Solving Radicals 9: Solve radical equations

- 1 What is the value of  $x$  in the equation  $\sqrt{5-2x} = 3i$ ?  
 1) 1  
 2) 7  
 3) -2  
 4) 4

2 Solve:  $\sqrt{3x} - \sqrt{x-3} = 3$

3 Solve:  $\sqrt{x+2} + \sqrt{x-3} = 5$

4 Solve:  $\sqrt{x+4} - \sqrt{x-3} = 1$

5 Solve:  $x\sqrt{x} - 2\sqrt{x} = x$

6 Solve:  $\sqrt{x+1} - \sqrt{x-4} = \sqrt{x-7}$

7 Solve:  $\sqrt{6x+6} - \sqrt{3x+1} = \sqrt{5x-21}$

8 Solve:  $\sqrt{2x+3} - \sqrt{2x-2} = \sqrt{8x-23}$

9 Solve:  $\sqrt{x+2} + \sqrt{x-3} = \sqrt{2x+11}$

10 Solve:  $\sqrt{x+2} + \sqrt{x-3} = \sqrt{4x-3}$

11 Solve:  $2\sqrt{x+1} = \sqrt{x-4} + \sqrt{x+8}$

12 Solve:  $\sqrt{x-1} + \sqrt{x} = \frac{2}{\sqrt{x}}$

13 Solve:  $\sqrt{x} - \sqrt{x-8} = \frac{2}{\sqrt{x-8}}$

14 Solve:  $\sqrt{4+x} + \frac{10}{\sqrt{5x}} = \sqrt{5x}$

15 Solve:  $\sqrt{x+10} - \frac{6}{\sqrt{x+10}} = 5$

16 Solve:  $x + \sqrt{x^2 - 8} = \frac{3x - \sqrt{x^2 - 8}}{x - \sqrt{x^2 - 8}}$

17 Solve:  $\frac{1}{1-x} + \frac{1}{1+\sqrt{x}} - \frac{1}{1-\sqrt{x}} = 0$

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### Answer Section

- |    |                  |               |              |
|----|------------------|---------------|--------------|
| 1  | ANS: 2           | PTS: 2        | REF: 080302b |
| 2  | ANS:<br>12 and 3 |               |              |
|    | PTS: 12          | REF: 090407a1 |              |
| 3  | ANS:<br>7        |               |              |
|    | PTS: 10          | REF: 039410a1 |              |
| 4  | ANS:<br>12       |               |              |
|    | PTS: 10          | REF: 019511a1 |              |
| 5  | ANS:<br>0 and 4  |               |              |
|    | PTS: 10          | REF: 039913a1 |              |
| 6  | ANS:<br>8        |               |              |
|    | PTS: 20          | REF: 099409a1 |              |
| 7  | ANS:<br>5        |               |              |
|    | PTS: 20          | REF: 019609a1 |              |
| 8  | ANS:<br>3        |               |              |
|    | PTS: 10          | REF: 099809a1 |              |
| 9  | ANS:<br>7        |               |              |
|    | PTS: 12          | REF: 099905a1 |              |
| 10 | ANS:<br>7        |               |              |
|    | PTS: 12          | REF: 010510a1 |              |
| 11 | ANS:<br>8        |               |              |
|    | PTS: 12          | REF: 090509a1 |              |

12 ANS:  
 $\frac{4}{3}$

PTS: 10 REF: 060013al

13 ANS:  
9

PTS: 10 REF: 069711al

14 ANS:  
1 and 5

PTS: 12 REF: 030509al

15 ANS:  
26

PTS: 12 REF: 060504al

16 ANS:  
3

PTS: 12 REF: 010608al

17 ANS:  
 $\frac{1}{4}$

PTS: 10 REF: 039911al