

**Practice Test WKS #2**

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Date\_\_\_\_\_ Period\_\_\_\_

**Solve each equation. Remember to check for extraneous solutions.**

1)  $4 = \sqrt{26 - x}$

2)  $\sqrt{12 - 2b} = \sqrt{4b}$

3)  $x - 7 = \sqrt{14 - 2x}$

4)  $\sqrt{3b - 21} - 5 = -2$

5)  $-3 - \sqrt{6 - 2x} = \sqrt{2x + 3}$

6)  $1 = \sqrt{\frac{x}{6}} - 1$

**Simplify.**

$$7) \ 3\sqrt{15}(4 - 4\sqrt{3})$$

$$8) \ 2\sqrt{5}(4 + \sqrt{10})$$

$$9) \frac{2}{2 + \sqrt{3}}$$

$$10) \frac{4}{5\sqrt{5} - \sqrt{3}}$$

$$11) \frac{2}{\sqrt{2} + \sqrt{3}}$$

$$12) \frac{5}{3\sqrt{3} + \sqrt{5}}$$

$$13) \ \sqrt[5]{64b^8}$$

$$14) \ \sqrt[3]{448x^5}$$

$$15) \sqrt[4]{567n^7}$$

$$16) \sqrt[4]{128x^7}$$

$$17) \frac{\sqrt{3}}{2\sqrt{4}}$$

$$18) \frac{\sqrt{4}}{3\sqrt{36}}$$

$$19) \frac{3\sqrt{20}}{5\sqrt{36}}$$

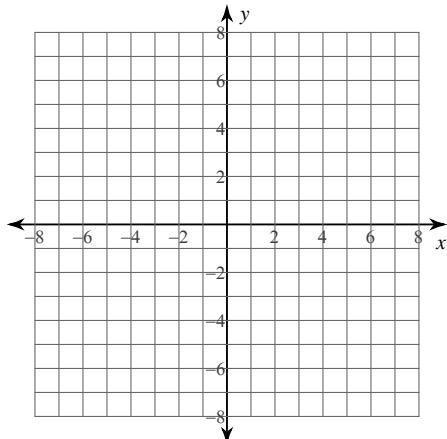
$$20) \frac{\sqrt{15}}{\sqrt{20}}$$

$$21) 2\sqrt{5} - \sqrt{3} - 2\sqrt{20}$$

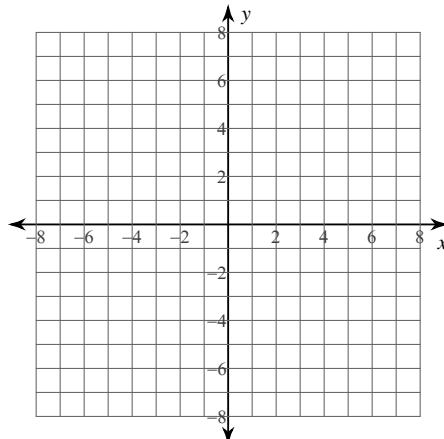
$$22) -2\sqrt{2} - 3\sqrt{54} - 2\sqrt{18}$$

**Sketch the graph of each function.**

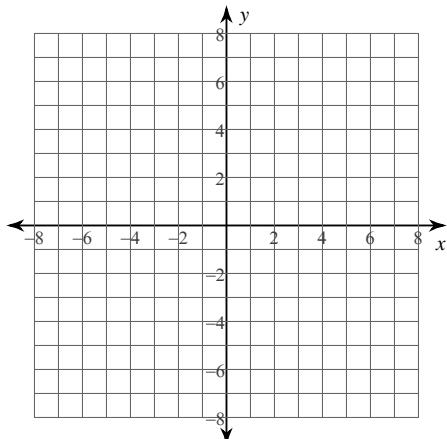
23)  $y = \sqrt{x - 2} + 1$



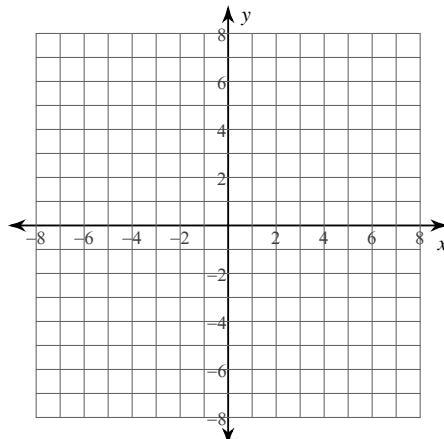
24)  $y = \sqrt{x + 6} + 4$



25)  $y = -3\sqrt{x - 3} + 5$



26)  $y = \sqrt{x + 4} + 4$



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**Solve each equation. Remember to check for extraneous solutions.**

1)  $4 = \sqrt{26 - x}$

{10}

2)  $\sqrt{12 - 2b} = \sqrt{4b}$

{2}

3)  $x - 7 = \sqrt{14 - 2x}$

{7}

4)  $\sqrt{3b - 21} - 5 = -2$

{10}

5)  $-3 - \sqrt{6 - 2x} = \sqrt{2x + 3}$

No solution.

6)  $1 = \sqrt{\frac{x}{6}} - 1$

{24}

**Simplify.**

$$7) \quad 3\sqrt{15}(4 - 4\sqrt{3})$$

$$12\sqrt{15} - 36\sqrt{5}$$

$$8) \quad 2\sqrt{5}(4 + \sqrt{10})$$

$$8\sqrt{5} + 10\sqrt{2}$$

$$9) \quad \frac{2}{2 + \sqrt{3}}$$

$$4 - 2\sqrt{3}$$

$$10) \quad \frac{4}{5\sqrt{5} - \sqrt{3}}$$

$$\frac{10\sqrt{5} + 2\sqrt{3}}{61}$$

$$11) \quad \frac{2}{\sqrt{2} + \sqrt{3}}$$

$$-2\sqrt{2} + 2\sqrt{3}$$

$$12) \quad \frac{5}{3\sqrt{3} + \sqrt{5}}$$

$$\frac{15\sqrt{3} - 5\sqrt{5}}{22}$$

$$13) \quad \sqrt[5]{64b^8}$$

$$2b\sqrt[5]{2b^3}$$

$$14) \quad \sqrt[3]{448x^5}$$

$$4x\sqrt[3]{7x^2}$$

15)  $\sqrt[4]{567n^7}$

$3n\sqrt[4]{7n^3}$

16)  $\sqrt[4]{128x^7}$

$2x\sqrt[4]{8x^3}$

17)  $\frac{\sqrt{3}}{2\sqrt{4}}$

$\frac{\sqrt{3}}{4}$

18)  $\frac{\sqrt{4}}{3\sqrt{36}}$

$\frac{1}{9}$

19)  $\frac{3\sqrt{20}}{5\sqrt{36}}$

$\frac{\sqrt{5}}{5}$

20)  $\frac{\sqrt{15}}{\sqrt{20}}$

$\frac{\sqrt{3}}{2}$

21)  $2\sqrt{5} - \sqrt{3} - 2\sqrt{20}$

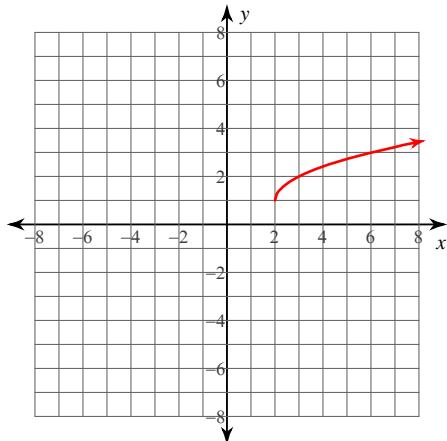
$-2\sqrt{5} - \sqrt{3}$

22)  $-2\sqrt{2} - 3\sqrt{54} - 2\sqrt{18}$

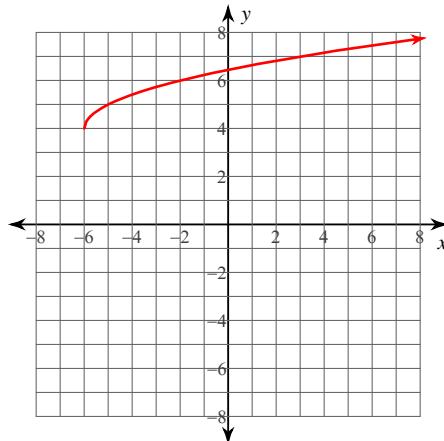
$-8\sqrt{2} - 9\sqrt{6}$

**Sketch the graph of each function.**

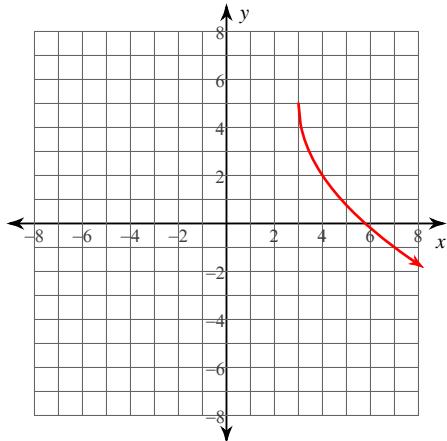
23)  $y = \sqrt{x - 2} + 1$



24)  $y = \sqrt{x + 6} + 4$



25)  $y = -3\sqrt{x - 3} + 5$



26)  $y = \sqrt{x + 4} + 4$

