

06 - Lesson 5, Exam 6

Part 1 of 1 -

20.0/ 100.0 Points

Question 1 of 20

0.0/ 5.0 Points

Multiply and simplify if possible.

$$\sqrt{6} \cdot \sqrt{2}$$

☐ A. $2\sqrt{3}$

☒ B. $3\sqrt{2}$

☐ C. $\sqrt{12}$

☐ D. not possible

Question 2 of 20

5.0/ 5.0 Points

How can you write the expression with rationalized denominator?

$$\frac{\sqrt{3} - \sqrt{6}}{\sqrt{3} + \sqrt{6}}$$

☐ A. $\frac{-1 - 2\sqrt{18}}{3}$

☐ B. $\frac{-3 - 2\sqrt{18}}{9}$

☒ C. $-3 + 2\sqrt{2}$

☐ D. $9 - 2\sqrt{18}$

Question 3 of 20

0.0/ 5.0 Points

What is the solution of the equation?

$$-10 + \sqrt{x + 8} = -4$$

☐ A. 36

☐ B. 28

☒ C. 44

☐ D. -2

0.0/ 5.0 Points

Question 4 of 20

What is the simplest form of the expression?

$$\frac{\sqrt{6x^8y^9}}{\sqrt{5x^2y^4}}$$

☐ A.

$$\frac{x^3y^2\sqrt{30y}}{5}$$

☒ B.

$$\frac{\sqrt{30x^{10}y^{13}}}{5x^2y^4}$$

☐ C.

$$5x^3y^2\sqrt{30y}$$

☐ D. none of these

Question 5 of 20

0.0/ 5.0 Points

Find all the real cube roots of 0.000027.

☐ A. 0.0009 and -0.0009

☐ B. 0.0009

☒ C. 0.03 and -0.03

☐ D. 0.03

Question 6 of 20

0.0/ 5.0 Points

The area of a circular trampoline is 112.07 square feet. What is the radius of the trampoline? Round to the nearest hundredth.

☐ A. 3.37 feet

☐ B. 10.59 feet

☒ C. 35.67 feet

☐ D. 5.97 feet

Question 7 of 20

0.0/ 5.0 Points

Find the real-number root.

$$\sqrt{-2.56}$$

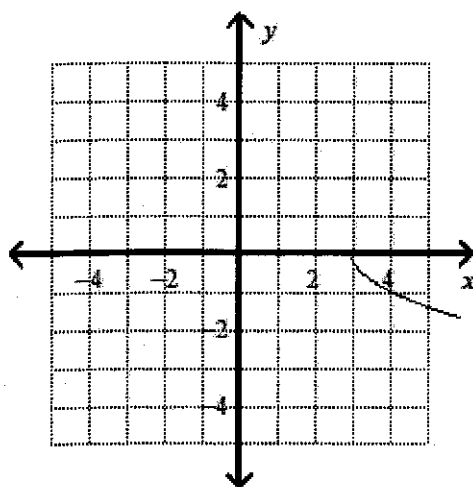
- ☐ A. -1.28
- ☐ B. 1.6
- ☒ C. -1.6
- ☐ D. no real number root

Question 8 of 20

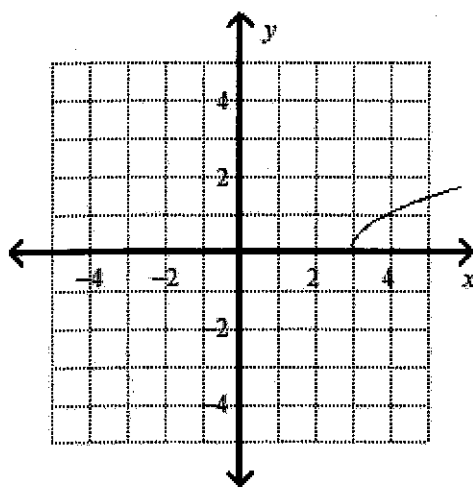
5.0/ 5.0 Points

Graph the equation.

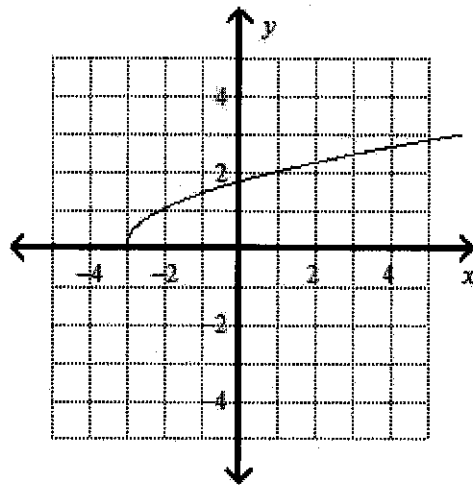
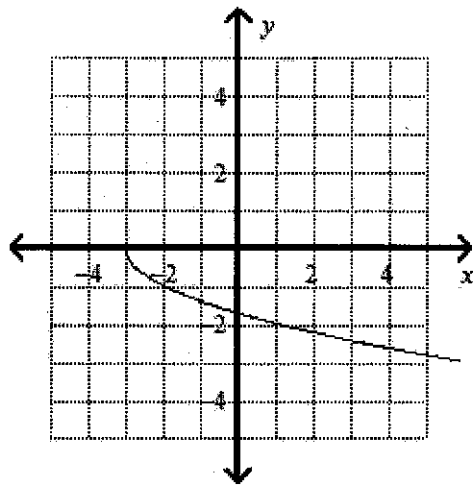
$$y = \sqrt{x - 3}$$



☐ A.



☒ B.


☐ C.

☐ D.

Question 9 of 20

0.0/ 5.0 Points

$$\sqrt{1.69}$$

- ☐ A. 1.3
☒ B. 2.86
☐ C. 0.85
☐ D. no real number root

Question 10 of 20

0.0/ 5.0 Points

What is the solution of $\sqrt{2x+4} - \sqrt{x} = 2$?

- ☐ A. $x = 0$
☐ B. $x = 16$ and $x = -16$
☒ C. $x = 0$ and $x = -16$

- ☐ D. $x = 0$ and $x = 16$

Question 11 of 20

0.0/ 5.0 Points

What is the solution of the equation?

$$2\sqrt[3]{(x+6)^3} + 3 = 19$$

- ☐ A. 38
- ☒ B. 14
- ☐ C. 26
- ☐ D. 2

Question 12 of 20

0.0/ 5.0 Points

Find all the real square roots of $\frac{9}{16}$.

- ☐ A.
no real root

- ☐ B.

$$-\frac{3}{4}$$

- ☒ C.

$$-\frac{3}{4} \text{ and } \frac{3}{4}$$

- ☐ D.

$$\frac{81}{256}$$

Question 13 of 20

0.0/ 5.0 Points

What is the simplest form of the expression?

$$\sqrt{20} + \sqrt{45} - \sqrt{5}$$

- ☐ A. $6\sqrt{5}$

- ☐ B. $4\sqrt{5}$

- ☒ C. $13\sqrt{5}$

☐ D. $5\sqrt{5}$

Question 14 of 20

5.0/ 5.0 Points

What is the solution of the equation? Eliminate any extraneous solutions.

$$\sqrt{3x+28} - 8 = x$$

- ☐ A. -9
- ☐ B. -9 and -4
- ☒ C. -4
- ☐ D. 9 and -4

Question 15 of 20

0.0/ 5.0 Points

What is a simpler form of the radical expression?

$$\sqrt[4]{81x^{20}y^8}$$

- ☐ A. $3x^5|y^2|$
- ☐ B. $9|x^{25}|y^4$
- ☒ C. $9x^{25}|y^4|$
- ☐ D. $3|x^5|y^2$

Question 16 of 20

0.0/ 5.0 Points

Find all the real square roots of 0.0004.

- ☐ A. 0.00632 and -0.00632
- ☐ B. 0.06325 and -0.06325
- ☒ C. 0.0002 and -0.0002
- ☐ D. 0.02 and -0.02

Question 17 of 20

0.0/ 5.0 Points

Find all the real fourth roots of $\frac{256}{2401}$.

☐ A.

$\frac{4}{7}$ and $\frac{16}{49}$

☐ B.

$$-\frac{4}{7} \text{ and } \frac{4}{7}$$

☒ C.

$$\frac{4}{7}, -\frac{4}{7}, \frac{16}{49} \text{ and } -\frac{16}{49}$$

☐ D.

$$\frac{4}{7}$$

Question 18 of 20

0.0/ 5.0 Points

What is the product of the radical expression?

$$(7 - \sqrt{2})(8 + \sqrt{2})$$

☐ A. $54 + 56\sqrt{2}$

☐ B. $54 - \sqrt{2}$

☒ C. $58 + 56\sqrt{2}$

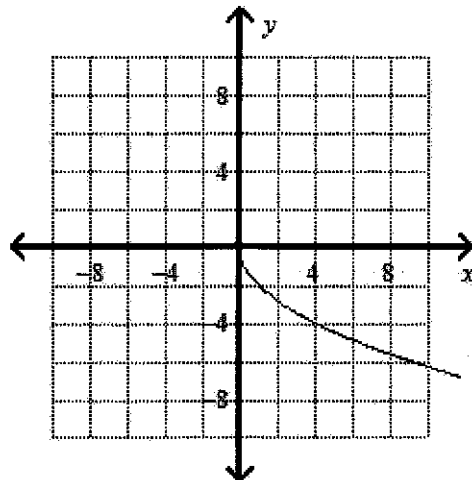
☐ D. $13 + 15\sqrt{2}$

Question 19 of 20

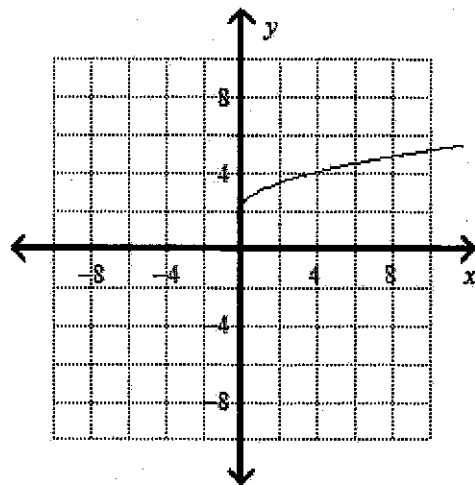
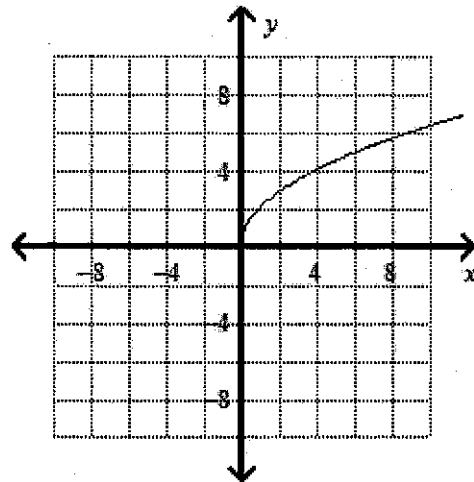
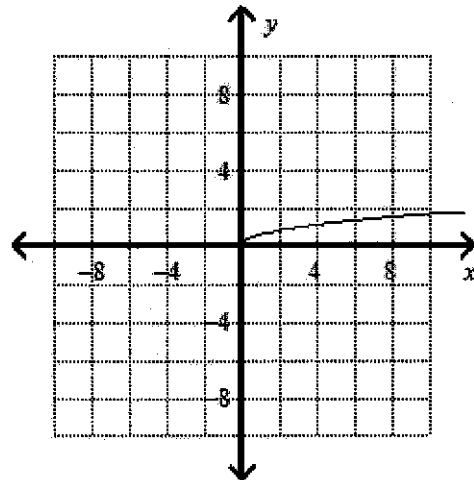
5.0/ 5.0 Points

Graph the equation.

$$y = 2\sqrt{x}$$



☐ A.


☐ B.

☒ C.

☐ D.

Question 20 of 20

0.0/ 5.0 Points

What is the simplest form of the radical expression?

$$4\sqrt[3]{3x} + 5\sqrt[3]{10x}$$

☐ A. $9\sqrt[3]{13x}$

- ☒ B. $27\sqrt{3x}$
- ☐ C. $27\sqrt{10x}$
- ☐ D. not possible to simplify