Math 0090 Lab Worksheet #10

Objective: Solve problems #1 - #10 involving radical expressions. #11 through #15 are review problems.

1. Simplify. $\sqrt{252}$

   A. $2\sqrt{63}$

   B. $3\sqrt{28}$

   C. $6\sqrt{7}$

   D. $7\sqrt{6}$

2. Perform the indicated operation. $\sqrt{35} \bullet \sqrt{10}$

   A. $2\sqrt{175}$

   B. $5\sqrt{14}$

   C. $7\sqrt{50}$

   D. $14\sqrt{5}$

   3.

3. Perform the indicated operation. $-5\sqrt{8} + 2\sqrt{18}$

   A. $-3\sqrt{26}$

   B. $-3\sqrt{10}$

   C. $-11\sqrt{2}$

   D. $-4\sqrt{2}$

4. Simplify. $\sqrt{12x^6y^8}$

   A. $6x^3y^4$

   B. $2x^3y^4\sqrt{3}$

   C. $2\sqrt{3x^6y^8}$

   D. $4x^3y^4\sqrt{3}$

5. Perform the indicated operation. $-3\sqrt{20x^2}+2\sqrt{125x^2}$

A. $-\sqrt{145}x$

B. $-x\sqrt{10}$

C. $-10x$

D. $4x\sqrt{5}$

6. Perform the indicated operation. $-4\sqrt{20}+2\sqrt{45}+16\sqrt{5}$

A. $14\sqrt{5}$

B. $18\sqrt{5}$

C. $14\sqrt{30}$

D. $14\sqrt{70}$

7. Perform the indicated operation. $-7\sqrt{18x}+3\sqrt{98x}$

A. $-8\sqrt{2x}$

B. $-\sqrt{2x}$

C. 0

D. $\sqrt{2x}$

8. Simplify. $\sqrt{\dfrac{49x^3}{81y^4}}$

A. $\sqrt{\dfrac{7x}{9y^2}}$

B. $\dfrac{7x}{9y^2}$

C. $\dfrac{7x\sqrt{x}}{9y^2}$

D. $\dfrac{7x^3}{9y^4}$

9. Simplify. $\left(9a^4b^3\right)^{\frac{1}{2}}$

A. $3a^2b\sqrt{b}$

B. $3a^2b^2$

C. $4.5a^2b\sqrt{b}$

D. $4.5a^4b^3$

10. Simplify. $\dfrac{x^{\frac{1}{3}}y^2}{x^2y^{\frac{2}{3}}} \div \dfrac{y^{\frac{1}{3}}}{x^{\frac{5}{3}}}$

A. 0

B. 1

C. y

D. $y^{\frac{5}{3}}$

11. A stereo system is marked 25% off. If the original price of the stereo system was \$1,550 and the sales tax rate is 8%, what will the total cost of the stereo system be?

A. \$511.50

B. \$1,162.50

C. \$1,255.50

D. \$1,517.50

12. Solve for x. $3x + 2y = 3$
$2x - 4y = -14$

A. -3

B. -1

C. 1

D. 3

13. One factor of $x^2 - 14x - 32$ is

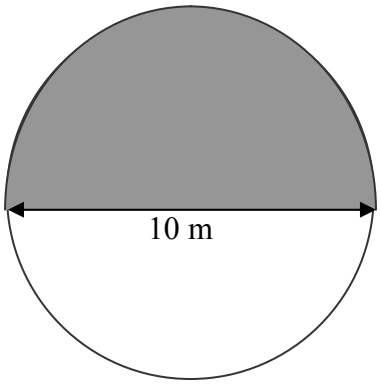
A. $(x - 16)$

B. $(x - 8)$

C. $(x - 2)$

D. $(x + 4)$

14. What is the area of the shaded part of the following figure?



A. 10π m^2

B. 12.5π m^2

C. 25π m^2

D. 50π m^2

15. About 7 out of 10 people entering a community college need to take a refresher math course. If the college has 950 students, how many will probably need refresher math course?

A. 665 students

B. 685 students

C. 700 students

D. 1375 students