

GRE Arithmetic Practice Test 11

Question 1

Simplify the following:

$$\sqrt{125} + \sqrt{245} + \sqrt{80}$$

Possible Answers:

$$90\sqrt{5}$$

$$16\sqrt{5}$$

$$3\sqrt{5} + 21\sqrt{2}$$

$$\sqrt{450}$$

It cannot be simplified any further



Correct answer:

$$16\sqrt{5}$$

Question 2

Simplify the following:

$$\sqrt{40} + \sqrt{20} + \sqrt{160}$$

Possible Answers:

$$\sqrt{10}(6 + \sqrt{2})$$

$$4\sqrt{20}$$

$$\sqrt{5}(5 + 2\sqrt{2})$$

$$8\sqrt{10}$$

The expression cannot be simplified any further.



Correct answer:

$$\sqrt{10}(6 + \sqrt{2})$$

Question 3

$$\frac{\sqrt{243}}{\sqrt{48}} =$$

Possible Answers:

$$4\sqrt{3}$$

$$9\sqrt{3}$$

$$\frac{81}{16}$$

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

$$\frac{9}{4}$$



Correct answer:

$$\frac{9}{4}$$

Question 4

$$\frac{\sqrt{343}}{\sqrt{63}} =$$

Possible Answers:

$$3\sqrt{3}$$

$$7\sqrt{7}$$

$$\frac{3}{7}$$

$$\frac{7}{3}$$

$$\frac{49}{9}$$



Correct answer:

$$\frac{7}{3}$$

Question 5

$$\frac{\sqrt{150}}{\sqrt{48}} =$$

Possible Answers:

$$\frac{5\sqrt{3}}{4}$$

$$\frac{25\sqrt{2}}{16}$$

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

$$\frac{5\sqrt{2}}{4}$$

$$5\sqrt{2}$$



Correct answer:

$$\frac{5\sqrt{2}}{4}$$

Question 6

Simplify: $\frac{2\sqrt{3}}{\sqrt{2}} + \frac{4\sqrt{2}}{\sqrt{3}}$

Possible Answers:

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

$\frac{7\sqrt{6}}{3}$

None of the other answers

$2\sqrt{6}$

$2\sqrt{6} - 4\sqrt{2}$



Correct answer:

$\frac{7\sqrt{6}}{3}$

Question 7

Compare the quantities.

Quantity A: $\sqrt{60} + \sqrt{375}$

Quantity B: $\sqrt{135} + \sqrt{240}$

Possible Answers:

Quantity B is larger.

The two quantities are equal.

The relationship cannot be determined from the information given.

Quantity A is larger.



Correct answer:

The two quantities are equal.

Question 8

Simplify the following expression: $\sqrt{60} + \sqrt{40} + \sqrt{10}$

Possible Answers:

$$2\sqrt{15} + 2\sqrt{20}$$

$$4\sqrt{15} + 5\sqrt{5}$$

25

$$2\sqrt{15} + 3\sqrt{10}$$

$$5\sqrt{25}$$



Correct answer:

$$2\sqrt{15} + 3\sqrt{10}$$

Question 9

Solve for x .

Note, $x \geq 0$:

$$15\sqrt{x} - 10 = 4\sqrt{x} + 4$$

Possible Answers:

$$\frac{196}{121}$$

$$\frac{841}{14}$$

81

$$\frac{196}{11}$$

$$\frac{841}{5}$$



Correct answer:

$$\frac{196}{121}$$

Question 10

Simplify the following expression: $3\sqrt{27} + 5\sqrt{48} - 3\sqrt{147}$

Possible Answers:

$8\sqrt{3}$

Cannot be simplified any further

$5\sqrt{72}$

$5\sqrt{3}$

$2\sqrt{76}$



Correct answer:

$8\sqrt{3}$