GRE Arithmetic Practice Test 12

Question 1

Which of the following is equal to $\sqrt{81}/\sqrt{6}$

Possible Answers:

$3\sqrt{6}/2$
$3\sqrt{3}$
$2\sqrt{3}$
$\sqrt{3}/2$
$3\sqrt{6}$
Correct answer: $3\sqrt{6}/2$

 $\frac{\sqrt{343x^5}}{\sqrt{49x^3}}$

Possible Answers:

$\frac{x}{7}$
$7\sqrt{x}$
$\frac{7}{x}$
$x\sqrt{7}$
7x
Correct answer: $x\sqrt{7}$

Solve for *x*:

$$\frac{1}{\sqrt{x}} = 4$$

16
$\frac{1}{4}$
$\pm \frac{1}{16}$
4
$\frac{1}{16}$
Correct answer: $\frac{1}{16}$

Question 4

Rationalize the denominator:



Possible Answers:

$\frac{\sqrt{5}}{2}$
$\frac{5}{2}$
$\frac{2\sqrt{5}}{5}$
$\frac{5}{2\sqrt{5}}$
$\frac{2}{5}$
Correct answer: $\frac{2\sqrt{5}}{5}$

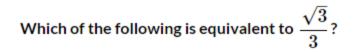
 $\frac{\sqrt{250}}{\sqrt{10}}$

25
$\frac{\sqrt{10}}{2}$
$\sqrt{10}$
5
$\frac{\sqrt{10}}{5}$
Correct answer:
Question 6

 $\frac{\sqrt{21}}{\sqrt{20}}$

$\frac{21}{20}$
$\frac{\sqrt{21}}{10}$
$\frac{\sqrt{105}}{10}$
$\frac{\sqrt{105}}{50}$
$\frac{105}{10}$
Correct answer: $\frac{\sqrt{105}}{10}$

Question 7



Possible Answers: $\frac{1}{3}$ $\sqrt{3}$ $\frac{1}{\sqrt{3}}$ $\frac{3}{\sqrt{3}}$ Correct answer: $\frac{1}{\sqrt{3}}$

Rationalize the denominator and simplify:

$$\frac{\sqrt{8}+\sqrt{12}}{\sqrt{6}}$$

$\frac{2\sqrt{3}+3\sqrt{2}}{3}$
$\frac{5}{3}$
$\frac{\sqrt{15}}{3}$
$\frac{\sqrt{48} + \sqrt{72}}{6}$
$\frac{\sqrt{30}}{3}$
Correct answer: $\frac{2\sqrt{3} + 3\sqrt{2}}{3}$

Question 9

$$\sqrt{\frac{5}{6}} - \sqrt{\frac{7}{8}}$$

$\sqrt{\frac{35}{48}}\cdot -\frac{1}{24}$
$\frac{\sqrt{105}}{12}$
$\frac{4\sqrt{30}}{24} - \frac{3\sqrt{56}}{24}$
$\frac{2\sqrt{14}-3\sqrt{30}}{12}$
$\frac{2\sqrt{30}-3\sqrt{14}}{12}$
Correct answer: $\frac{2\sqrt{30} - 3\sqrt{14}}{12}$

Question 10

$$\frac{1+\sqrt{2}}{1-\sqrt{2}}$$

$-3-2\sqrt{2}$
$-5\sqrt{2}$
$3+2\sqrt{2}$
$-3+2\sqrt{2}$
$-\sqrt{2}$
Correct answer: $-3 - 2\sqrt{2}$