Ninth Grade - Real Number System

1) Evaluate the following with rational exponents 8?

- 6
- 4
- 5
- 7

2) Evaluate the following with rational exponents (27)??

- 1/9
- 3/2
- 1/8
- 2/3

3) Evaluate the following with rational exponents $(100)^{3/2}$

- 1000
- 4000
- 2000
- 3000

4) Evaluate the following with rational exponents $9^{3/2}$

- 27
- 12
- 28
- 45

5) Evaluate the following with rational exponents $(x^2)^{1/2}$

- 2x
- x²
- 2x²
- x

6) Evaluate the following with rational exponents (64a?)?

- 2a
- 2a²
- 3a
- 3a²

7) Evaluate (y¹²) ¼ with rational exponents

- y²
- 2y
- y
- y³

8) Evaluate (a?)¼ with rational exponents

- 2a
- a²
- a³
- a

9) Solve (4)? / (4)² using the properties of exponents

- 45
- 64
- 32
- 21

10) Solve the following using the properties of exponents $(y)? \times (y)?$

- y^3
- y
- $3y$
- y^2

11) Solve $(x)\frac{1}{4} \times (x)^1$ using the properties of exponents

$$a)\ (x)^{5/4} \quad b)\ (x)^{3/4} \quad c)\ (x)^{3/5} \quad d)\ (x)^{4/5}$$

- c
- a
- d
- b

12) Solve $(y)^1 \times (y)^2$ using the properties of exponents

- y
- y^3
- y^2
- $2y$

13) Solve the properties of exponents? $(x)? \times (x)??$

- x?
- x?
- x?
- x?

14) Solve $(5)?/(5)^2$ the using properties of exponents

- 35
- 45
- 13
- 25

15) Solve the following using the properties of exponents

$$(x)^y \div (x)^z$$

$$a. \, (x)^{x/w} \quad b. \, (x)^{x/z} \quad c. \, (x)^{z/x} \quad d. \, (x)^{y-z}$$

- b
- a
- c
- d

16) Solve the following using the properties of exponents

$$(8)^x \div (8)^y$$

$$a) \, (8)^{z-y} \quad b) \, (8)^{z-x} \quad c) \, (8)^{x-y} \quad d) \, (8)^{x-x}$$

- b
- c
- d
- a

17) Solve the following using the properties of exponents $(4^{3/2})^2$

- 64
- 45
- 65
- 12

18) Solve the following using the properties of exponents

$$(1/2^5)^{1/4}$$

$(a)\ (1/2)^{5/3}\quad (b)\ (1/2)^{5/4}\quad (c)\ (1/2)^{4/3}\quad (d)\ (1/2)^{3/4}$

- b
- d
- a
- c

19) Solve the following using the properties of exponents

$$(y^a)^{b/4}$$

$a)\ (y^{ab/4})\quad b)\ (y^{3a})\quad c)\ (y^{3a/2})\quad d)\ (y^{3a/3})$

- d
- a
- b
- c

20) Solve $(9 \times 4)^{1/2}$ using the properties of exponents

- 9
- 6
- 7
- 4

21) Solve $(5 \times 2)^2$ using the properties of exponents

- 100
- 200
- 245
- 124

22) Solve the following using properties of exponents (8/27) ?

- 2/3
- 4/2
- 3/7
- 8/9

23) Solve the following using properties of exponents (x/z) ?

- x? / z?
- x½ / z?
- x² / z²
- x? / z?

24) Solve (7/2)? using the properties of exponents

- 7?/2?
- 8x/5x
- 2?/3?
- 8?/3?

25) Solve (7/5)?³ using the properties of exponents

- (5/7)²
- (5/7)³
- (5/9)³
- (9/7)²

26) Solve the following using properties of exponents (12? / 4?)?²

- (1/5)?

- (1/6)?
- (2/9)?
- (1/3)?

27) Solve the following using properties of exponents $x?^{\frac{1}{2}} / y\ ??$

- $x^{\frac{1}{2}}$
- $y?$
- $x? / y^{\frac{1}{2}}$
- $y? / x^{\frac{1}{2}}$

28) Solve the following using properties of exponents

$$(7)^{-x} / (8)^{-y}$$

$$a)\ (5)^{y} / (3)^{x} \quad b)\ (4)^{y} / (3)^{x} \quad c)\ (9)^{y} / (7)^{x} \quad d)\ (8)^{y} / (7)^{x}$$

- b
- c
- a
- d

29) Solve $(5 \times 5)^2$ using the properties of exponents?

- 457
- 625
- 478
- 123

30) Solve the following using properties of exponents

$(8)^{-mx} / (6)^{-ny}$

$a) 8 / 6 \quad b) 7 / 6 \quad c) 3 / 6 \quad d) (6)^{ny} / (8)^{mx}$

- c
- b
- a
- d

$a) 8 / 6 \quad b) 7 / 6 \quad c) 3 / 6 \quad d) (6)^{ny} / (8)^{mx}$