Ninth Grade - Real Number System

1) Evaluate the following with rational exponents 8?

- 6
- 5
- 7
- 4

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

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

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

- 3000
- 1000
- 4000
- 2000

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

- 12
- 28
- 45
- 27

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

- x^2
- $2x^2$
- $2x$
- x

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

- 3a
- $2a^2$
- 2a
- $3a^2$

7) Evaluate (y^{12}) ¼ with rational exponents

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

8) Evaluate (a?)¼ with rational exponents

- 2a
- a^2
- a
- a^3

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

- 21
- 32
- 45
- 64

10) Solve the following using the properties of exponents (y)? × (y)?

- y²
- y
- 3y
- y³

11) Solve (x)¼ × (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 × (y)² using the properties of exponents

- y²
- y³
- 2y
- y

13) Solve the properties of exponents? (x)? × (x)??

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

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

- 45
- 25
- 35
- 13

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
- d
- c
- a

16) Solve the following using the properties of exponents

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

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

- c
- a
- b
- d

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

- 12
- 64
- 45
- 65

18) Solve the following using the properties of exponents

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

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

- a
- b
- d
- c

19) Solve the following using the properties of exponents

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

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

- d
- a
- c
- b

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

- 4
- 9
- 6
- 7

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

- 245
- 100
- 124
- 200

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

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

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

- x^2 / z^2
- x½ / z?
- x? / z?
- x? / z?

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

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

25) Solve (7/5)?³ using the properties of exponents
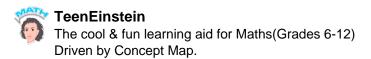
- $(5/9)^3$
- $(5/7)^3$
- $(9/7)^2$
- $(5/7)^2$

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

- (1/6)?

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- (1/3)?
- (1/5)?
- (2/9)?

27) Solve the following using properties of exponents $x?½ / y ??$

- y?
- y? / x½
- x½
- x? / y½

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?

- 123
- 478
- 457
- 625

30) Solve the following using properties of exponents

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

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

- a
- c
- d
- b

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