

Exam

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find the value of the exponential expression.

1) 2^3

A) 6

B) 4

C) 5

D) 8

Answer: D

2) 21^2

A) 441

B) 23

C) 882

D) 42

Answer: A

3) 2^5

A) 4

B) 32

C) 25

D) 10

Answer: B

4) $\left(\frac{4}{7}\right)^3$

A) $3\frac{4}{7}$

B) $\frac{64}{7}$

C) $\frac{343}{64}$

D) $\frac{64}{343}$

Answer: D

5) $(0.05)^3$

A) 0.15

B) 0.000125

C) 0.125

D) 0.01666667

Answer: B

Simplify.

6) $11 \cdot 6 + 10 \cdot 19$

A) 1444

B) 3344

C) 2156

D) 256

Answer: D

7) $2.7 \cdot 17.6 + 12.1 \cdot 19.1$

A) 1531.6

B) 671.5

C) 1138.7

D) 278.63

Answer: D

8) $240 \div 5 - 2$

A) 46

B) 233

C) 80

D) 237

Answer: A

9) $6^2 + 5^2$

A) 61

B) 44

C) 22

D) 121

Answer: A

10) $24 + 26 \cdot 28$

A) 78

B) 752

C) 652

D) 1400

Answer: B

11) $2 \cdot 6 - 9$

A) 21

B) 108

C) 6

D) 3

Answer: D

12) $6 \cdot 7 - 3 \cdot 9$

A) 351

B) 15

C) 1134

D) 216

Answer: B

13) $73 - 6 \cdot 2 \cdot 3$

A) 62

B) 402

C) 183

D) 37

Answer: D

14) $6^3 \div 12 - 10$

A) 8

B) 27

C) 108

D) 214

Answer: A

15) $\frac{7}{4} \cdot \frac{1}{3} + \frac{4}{5} \cdot \frac{1}{2}$

A) $\frac{13}{15}$ B) $\frac{59}{44}$ C) $\frac{59}{60}$ D) $\frac{59}{36}$

Answer: C

Find the value of the expression.

16) $5[4 + 9(9^2)]$

A) 36,125

B) 3665

C) 32,825

D) 180,625

Answer: B

17) $(8 + 7)[4 + (3 + 2)]$

A) 35

B) 135

C) 504

D) 560

Answer: B

18) $\frac{8(8 + 2) + 8 \cdot 3}{8(3 - 1)}$

A) $\frac{38}{23}$ B) $\frac{16}{23}$ C) $\frac{13}{2}$ D) $\frac{19}{8}$

Answer: C

19) $\frac{6(6 - 2) + 6 \cdot 3}{6(8 - 6)}$

A) $\frac{2}{7}$ B) $\frac{7}{2}$ C) $\frac{3}{7}$ D) $\frac{3}{2}$

Answer: B

20) $2[6^2 + 6(6 + 6)]$

A) 216

B) 156

C) 84

D) 1008

Answer: A

21) $\frac{2(15 - 2^2)}{3 \cdot 6 \cdot 12}$

A) $\frac{108}{11}$

B) $\frac{11}{9}$

C) $\frac{14}{9}$

D) $\frac{11}{108}$

Answer: D

22) $\left(\frac{5}{7} + \frac{4}{7}\right) \cdot \frac{7}{12}$

A) $\frac{21}{4}$

B) $\frac{3}{4}$

C) $\frac{4}{21}$

D) $\frac{8}{13}$

Answer: B

23) $\frac{5(2 + 1) - 6(1 + 1)}{5(4 - 2) - 2^3}$

A) $\frac{9}{2}$

B) $\frac{1}{2}$

C) $\frac{3}{2}$

D) $\frac{3}{8}$

Answer: C

Determine whether the statement is true or false.

24) $17 < 13$

A) False

B) True

Answer: A

25) $15 > 10$

A) False

B) True

Answer: B

26) $17 < 16 - 9$

A) False

B) True

Answer: A

27) $\frac{6 \cdot (7 + 8) + 6 \cdot 2}{6 \cdot (6 - 1)} < 10$

A) True

B) False

Answer: A

28) $7^2 \leq 8^2 - 2^2$

A) False

B) True

Answer: B

29) $(6 + 4)[3 + (7 + 3)] < 170$

A) False

B) True

Answer: B

30) $9 \cdot 2 - 7 \cdot 8 \leq 0$

A) False

B) True

Answer: B

31) $7[4 + (4 - 3)] < 29$

A) False

B) True

Answer: A

32) $\frac{7(5 + 2) + 7 \cdot 6}{4(3 + 9)} \leq 16$

A) False

B) True

Answer: B

33) $\frac{2(9 - 2) + 3(9 - 1)}{6(7 - 3) - 2(8 - 1)} \geq 2$

A) True

B) False

Answer: A

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Write the statement in words and decide whether it is true or false.

34) $1 \leq 6$

Answer: One is less than or equal to six. True

35) $4 \neq 5$

Answer: Four is not equal to five. True

36) $6 \geq 4$

Answer: Six is greater than or equal to four. True

37) $12 > 9 + 2$

Answer: Twelve is greater than nine plus two. True

38) $12 \leq 9 + 4$

Answer: Twelve is less than or equal to nine plus four. True

39) $\frac{13}{8} \neq \frac{5}{4}$

Answer: Thirteen-eighths is not equal to five-fourths. True.

40) $\frac{2}{5} \neq \frac{3}{10}$

Answer: Two-fifths is not equal to three-tenths. True.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Write the word statement in symbols.

41) Nine is greater than two plus six.

A) $9 > 2 + 6$

B) $9 < 2 + 6$

C) $2 + 6 > 9$

D) $9 + 2 > 6$

Answer: A