

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**A formula is given along with the values of all but one of the variables in the formula. Find the value of the variable not given. Round to the nearest hundredth where necessary.**

- 1) $P = 2L + 2W$; $L = 7$, $W = 4$ 1) _____
 A) 18 B) 22 C) 56 D) 11
- 2) $d = rt$; $t = 6$, $d = 54$ 2) _____
 A) 60 B) 9 C) 0.1 D) 48
- 3) $I = prt$; $I = 63$, $p = 210$, $r = 0.05$ 3) _____
 A) 6 B) 0.6 C) 6.615 D) 661.5

Answer the question.

- 4) Choose the expression that is equivalent to the following: $7 - 7$ 4) _____
 A) $7 + (-7)$ B) $(7)(7)$ C) $2(7)$ D) $(-2)(7)$

Determine whether the statement is true or false.

- 5) $4 \geq 9$ 5) _____
 A) True B) False
- 6) $7[5 + (5 - 3)] < 33$ 6) _____
 A) True B) False
- 7) $4 \leq 14 - 3$ 7) _____
 A) False B) True

Find the value of the exponential expression.

- 8) $(0.06)^3$ 8) _____
 A) 0.18 B) 0.216 C) 0.02 D) 0.000216
- 9) 13^2 9) _____
 A) 169 B) 338 C) 15 D) 26
- 10) 2^3 10) _____
 A) 6 B) 23 C) 8 D) 2

Find the value of the expression.

- 11) $\frac{7(8 - 2) + 7 \cdot 4}{7(7 - 4)}$ 11) _____
 A) $\frac{10}{3}$ B) $\frac{31}{21}$ C) $\frac{7}{15}$ D) $\frac{31}{45}$

12) $\left(\frac{3}{8} + \frac{5}{8}\right) \cdot \frac{9}{11}$
 A) $\frac{16}{27}$

B) $\frac{72}{11}$

C) $\frac{2}{11}$

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

12) _____

13) $\frac{3(18 - 3^2)}{2 \cdot 6 \cdot 15}$
 A) $\frac{9}{4}$

B) $\frac{20}{3}$

C) $\frac{3}{20}$

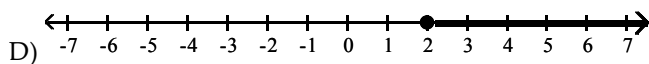
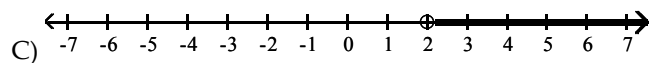
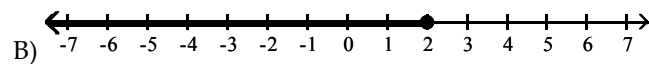
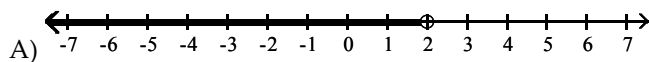
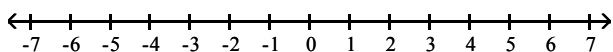
D) $\frac{17}{4}$

13) _____

Graph the inequality.

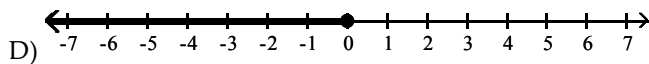
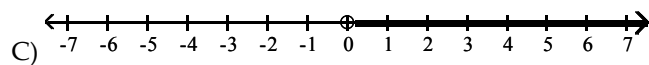
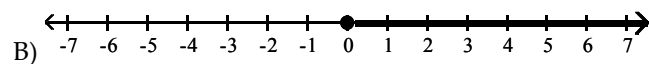
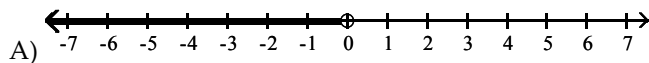
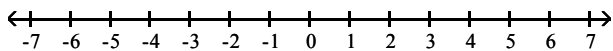
14) $x \leq 2$

14) _____



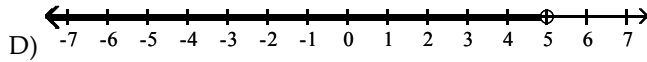
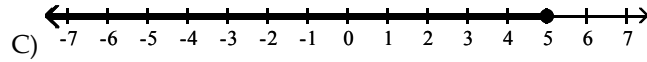
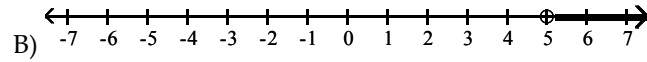
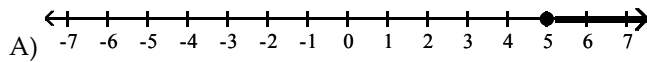
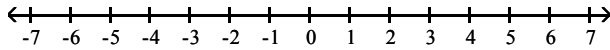
15) $x > 0$

15) _____



16) $x < 5$

16) _____



Provide an appropriate response.

17) Which one of the following is an example of a pair of like terms?

17) _____

A) $-5v^2x$, $9vx^2$

B) $9xz$, $5zx$

C) $5r$, $-2z$

D) $-2r^2$, $9r^5$

Rewrite the statement so the inequality symbol points in the opposite direction.

18) $.685 \geq .368$

18) _____

A) $.368 \geq .685$

B) $.685 \leq .368$

C) $.368 \leq .685$

D) $.685 < .368$

19) $32 \leq 45$

19) _____

A) $45 > 32$

B) $45 \leq 32$

C) $45 \geq 32$

D) $32 \geq 45$

20) $25 > 11$

20) _____

A) $25 \geq 11$

B) $11 > 25$

C) $11 < 25$

D) $25 < 11$

Simplify the expression.

21) $-9 + 8(17 - 7m)$

21) _____

A) $127 - 56m$

B) $136 - 56m$

C) $127 - 7m$

D) $127 + 56m$

Simplify.

22) $8 \cdot 17 + 16 \cdot 18$

22) _____

A) 2440

B) 2736

C) 424

D) 4752

23) $3 \cdot 9 - 5$

23) _____

A) 12

B) 135

C) 32

D) 22

24) $\frac{6}{5} \cdot \frac{1}{7} + \frac{5}{6} \cdot \frac{1}{5}$

24) _____

A) $\frac{71}{110}$

B) $\frac{71}{160}$

C) $\frac{13}{42}$

D) $\frac{71}{210}$

25) $240 \div 8 - 3$

25) _____

A) 27

B) 235

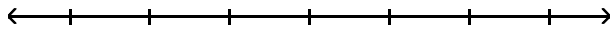
C) 229

D) 48

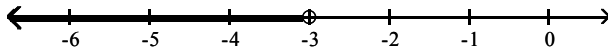
Solve the inequality, then graph the solution.

26) $-3t - 11 \geq -4t - 19$

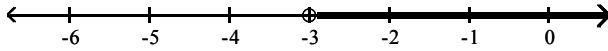
26) _____



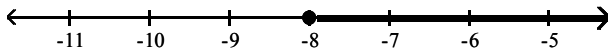
A) $t < -3$



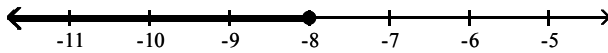
B) $t > -3$



C) $t \geq -8$

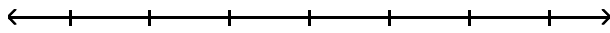


D) $t \leq -8$

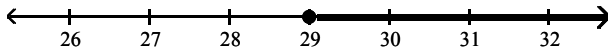


27) $6n + 9 > 5n + 20$

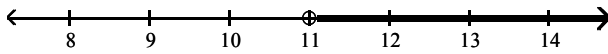
27) _____



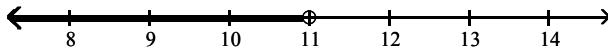
A) $n \geq 29$



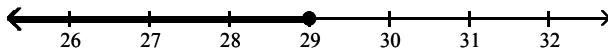
B) $n > 11$



C) $n < 11$

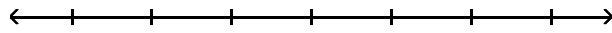


D) $n \leq 29$

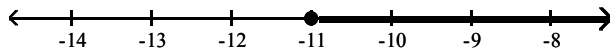


28) $-6c - 8 \leq -7c - 19$

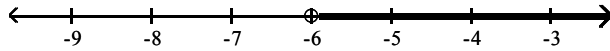
28) _____



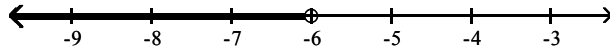
A) $c \geq -11$



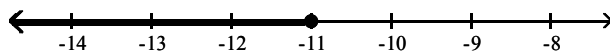
B) $c > -6$



C) $c < -6$

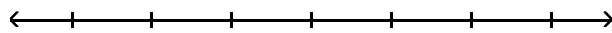


D) $c \leq -11$

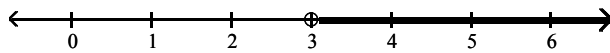


29) $12x < 36$

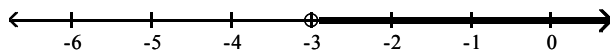
29) _____



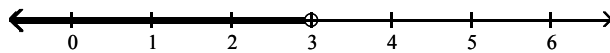
A) $x > 3$



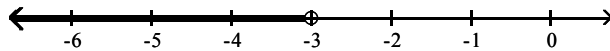
B) $x > -3$



C) $x < 3$

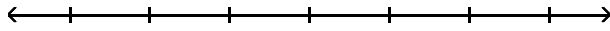


D) $x < -3$

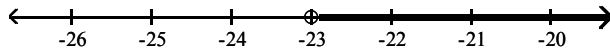


30) $23x > 0$

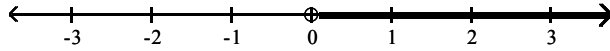
30) _____



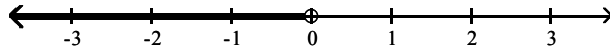
A) $x > -23$



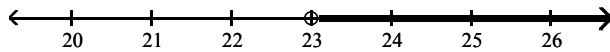
B) $x > 0$



C) $x < 0$

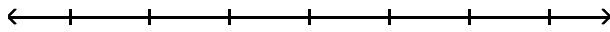


D) $x > 23$

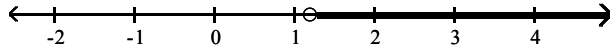


31) $-0.4z > -0.48$

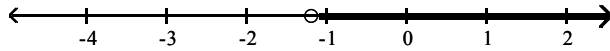
31) _____



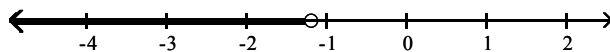
A) $x > 1.2$



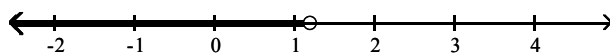
B) $x > -1.2$



C) $x < -1.2$

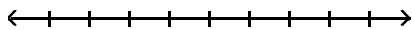


D) $x < 1.2$

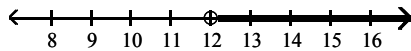


32) $2x + 10 + 3x < 8 + 3x + 6$

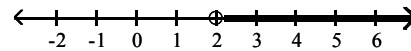
32) _____



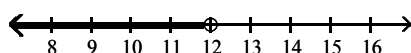
A) $x > 12$



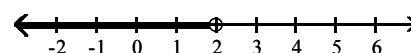
B) $x > 2$



C) $x < 12$

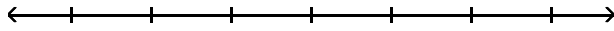


D) $x < 2$



33) $11t + 3 \geq 9t + 1$

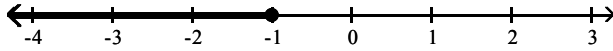
33) _____



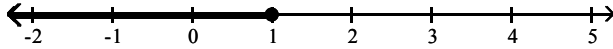
A) $t \geq -1$



B) $t \leq -1$



C) $t \leq 1$

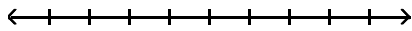


D) $t \geq 1$

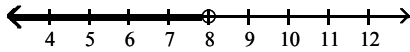


34) $\frac{7}{18}(x + 6) > \frac{1}{9}(x + 1)$

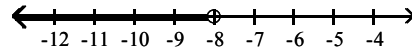
34) _____



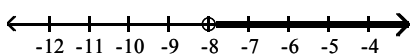
A) $x < 0$



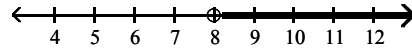
B) $x < -8$



C) $x > -8$



D) $x > 0$



Use a formula to solve the problem.

35) What is the perimeter of a rectangle of length 35 ft and width 9 ft?

35) _____

A) 79 ft

B) 44 ft

C) 88 ft

D) 176 ft

36) A rectangular Persian carpet has a perimeter of 220 inches. The length of the carpet is 22 inches more than the width. What are the dimensions of the carpet?

36) _____

A) 66 inches by 88 inches

B) 88 inches by 110 inches

C) 44 inches by 66 inches

D) 99 inches by 121 inches

Use the properties of real numbers to simplify the expression.

37) $\frac{3}{5}(-12)\left(\frac{5}{3}\right)$

37) _____

A) -12

B) 1

C) -1

D) $\frac{3}{5}$

38) $-\frac{4}{5} + \frac{5}{8} + \frac{11}{8} + \frac{4}{5}$

38) _____

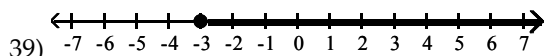
A) 2

B) 0

C) 4

D) 8

Write an inequality using the variable x that corresponds to the set graphed on the number line.



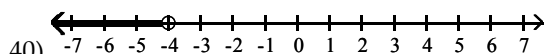
A) $x \leq -3$

B) $x \geq -3$

C) $x < -3$

D) $x > -3$

39) _____



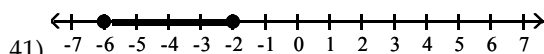
A) $x \leq -4$

B) $x > -4$

C) $x < -4$

D) $x \geq -4$

40) _____



A) $-6 < x \leq -2$

B) $-6 \leq x < -2$

C) $-6 < x < -2$

D) $-6 \leq x \leq -2$

41) _____

Write the phrase as a mathematical expression. Use x to represent the number. Combine like terms if possible.

42) A number multiplied by 4, added to -8 , subtracted from 3 times the sum of 8 times the number and 8

42) _____

A) $4x - 8 + 3(8 + 8x); 28x + 28$

B) $4(-8 + x) + 3(8 + 8x); 12x - 8$

C) $3(8x + 8) - [4x + (-8)]; 20x + 32$

D) $4(-8 + x) + 3(8x + 8); 28x - 24$

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.

43) $4 \neq 7$

43) _____

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

44) _____

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

45) _____

46) $4 \leq 9$

46) _____

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

Write the word statement in symbols.

47) Twelve is greater than three plus eight.

47) _____

A) $3 + 8 > 12$

B) $12 + 3 > 8$

C) $12 > 3 + 8$

D) $12 < 3 + 8$

48) Six is less than or equal to three plus four.

48) _____

A) $6 + 3 \geq 4$

B) $6 \leq 3 + 4$

C) $6 < 3 + 4$

D) $3 + 4 \leq 6$

49) Six is less than or equal to eight.

49) _____

A) $6 \geq 8$

B) $6 > 8$

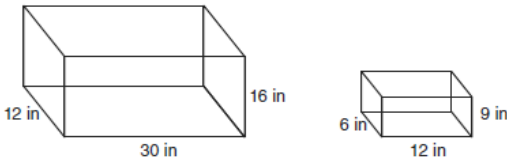
C) $6 \leq 8$

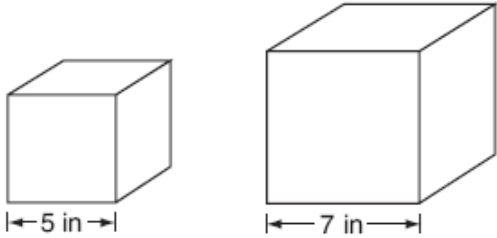
D) $6 < 8$

Answer Key

Testname: EXAM 3 REVIEW

- 1) B
- 2) B
- 3) A
- 4) A
- 5) B
- 6) B
- 7) B
- 8) D
- 9) A
- 10) C
- 11) A
- 12) D
- 13) C
- 14) B
- 15) C
- 16) D
- 17) B
- 18) C
- 19) C
- 20) C
- 21) A
- 22) C
- 23) D
- 24) D
- 25) A
- 26) C
- 27) B
- 28) D
- 29) C
- 30) B
- 31) D
- 32) D
- 33) A
- 34) C
- 35) C
- 36) C
- 37) A
- 38) A
- 39) B
- 40) C
- 41) D
- 42) C
- 43) Four is not equal to seven. True
- 44) Thirteen-eighths is not equal to five-fourths. True.
- 45) Two-fifths is not equal to three-tenths. True.
- 46) Four is less than or equal to nine. True
- 47) C
- 48) B
- 49) C

	QUESTIONS	SOLUTIONS
1	A block of wood is 5 inches long, 2 inches wide, and 3 inches high. What is the volume of this block of wood? (1) 10 in^3 (3) 30 in^3 (2) 25 in^3 (4) 38 in^3	(3) $5 \times 2 \times 3 = 30$
2	Lenny made a cube in technology class. Each edge measured 1.5 cm. What is the volume of the cube in cubic centimeters? (1) 2.25 (3) 9.0 (2) 3.375 (4) 13.5	(2) $1.5^3 = 3.375$
3	If the length of a side of a cube is $7x$, which expression represents the cube's volume? (1) $7x^3$ (3) $343x$ (2) $49x^3$ (4) $343x^3$	(4) $(7x)^3 = 343x^3$
4	A cardboard box has length $x - 2$, width $x + 1$, and height $2x$. a Write an expression, in terms of x, to represent the volume of the box. b If $x = 8$ centimeters, what is the number of cubic centimeters in the volume of the box?	a $(x - 2)(x + 1)(2x)$ b $(8 - 2)(8 + 1)(2(8)) = 864$
5	The diagram below represents Joe's two fish tanks.  Joe's larger tank is completely filled with water. He takes water from it to completely fill the small tank. Determine how many cubic inches of water will remain in the larger tank.	$(12 \times 30 \times 16) - (6 \times 12 \times 9) = 5112$
6	Tracey has two empty cube-shaped containers with sides of 5 inches and 7 inches, as shown in the accompanying diagram. She fills the smaller container completely with water and then pours all the water from the smaller container into the larger container. How deep, to the <i>nearest tenth of an inch</i>, will the water be in the larger container?	If Tracey fills the smaller container completely with water, it will contain $5^3 = 125$ cubic inches of water. $lwh = 125$ $7 \bullet 7 \bullet h = 125$ $h \approx 2.6$

		
7	The dimensions of a brick, in inches, are 2 by 4 by 8. How many such bricks are needed to have a total volume of exactly 1 cubic foot?	1 cubic foot equals 12^3 or 1728 cubic inches. $\frac{1728}{2 \times 4 \times 8} = 27 \text{ bricks}$
8	Tina's preschool has a set of cardboard building blocks, each of which measures 9 inches by 9 inches by 4 inches. How many of these blocks will Tina need to build a wall 4 inches thick, 3 feet high, and 12 feet long?	The wall in common dimensions is 4 by 36 by 144 inches, with a volume of 20736 cubic inches. The volume of a block is 324 cubic inches. $\frac{4 \times 36 \times 144}{9 \times 9 \times 4} = 64 \text{ blocks}$