

Name _____

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

Write the phrase as a variable expression. Use x to represent "a number."

1) The quotient of 23 and a number

- A) $x - 23$ B) $\frac{23}{x}$ C) $23 - x$ D) $\frac{x}{23}$

1) _____

Translate the phrase into a mathematical expression. Use x to represent "a number".

2) 6 times a number, decreased by 7

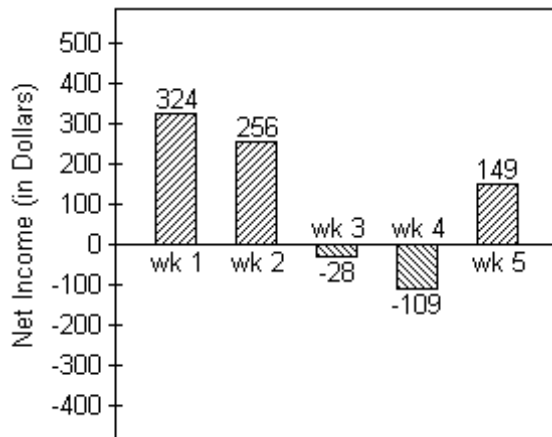
- A) $7 - 6x$ B) $6 - 7x$ C) $6x - 7$ D) $7x - 6$

2) _____

Solve the problem.

3) Joel has started a business mowing lawns for the summer. The bar graph below tracks his net income for five weeks.

3) _____



Find the difference in Joel's net income between week 2 and week 3.

- A) \$238 B) \$274 C) \$228 D) \$284

Round the money amount to the nearest cent or dollar as indicated.

4) \$43.76, nearest dollar

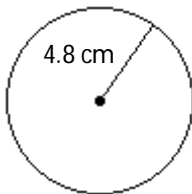
- A) \$43.8 B) \$50 C) \$44 D) \$43

4) _____

Find the circumference of the circle. Then use the approximation 3.14 for π and approximate the circumference.

5)

5) _____



- A) 30.144 cm B) 15.072 cm C) 29.184 cm D) 14.592 cm

Insert $<$, $>$, or $=$ between the pair of numbers to form a true statement.

6) 0.796 _____ $\frac{39}{49}$

- A) $>$ B) $=$ C) $<$

6) _____

Write the percent as a decimal.

7) 29.7%

A) 2.97

B) 0.297

C) 0.0297

D) 29.7

7) _____

Translate the question into a proportion. Do not solve.

8) 69% of what number is 51.1?

A) $\frac{a}{51.1} = \frac{69}{100}$

B) $\frac{69}{b} = \frac{51.1}{100}$

C) $\frac{a}{69} = \frac{51.1}{100}$

D) $\frac{51.1}{b} = \frac{69}{100}$

8) _____

Translate to a proportion and solve. Round to the nearest hundredth, if necessary.

9) 24 is 5% of what number?

A) 480

B) 48

C) 120

D) 4800

9) _____

For the food described, find the percent of total calories from fat. If necessary, round to the nearest tenth of a percent.

10) Salad dressing serving size 80 tablespoons.

10) _____

Calories	
Total	80
From fat	16

A) 20%

B) 500%

C) 2%

D) 10%

Write the phrase as a variable expression. Use x to represent "a number."

11) 25 subtracted from a number

A) 25x

B) 25 - x

C) 25

D) x - 25

11) _____

12) Twice a number, decreased by 43

A) 2x - 43

B) 2 + x - 43

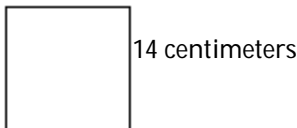
C) x - 86

D) 2(x - 43)

12) _____

Find the area of the square.

13)



A) 191 sq cm

B) 196 sq cm

C) 56 sq cm

D) 392 sq cm

13) _____

Simplify.

14) $32 - 6 \cdot 3$

A) 96

B) 50

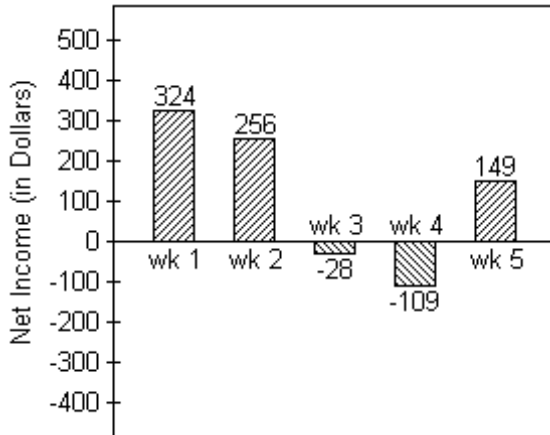
C) 78

D) 14

14) _____

Solve.

- 15) Joel has started a business mowing lawns for the summer. The bar graph below tracks his net income for five weeks. 15) _____



Find the difference in Joel's net income between week 1 and week 4.

- A) \$423 B) \$215 C) \$225 D) \$433
- 16) City A has an elevation of 11,267 feet above sea level while city B has an elevation of 16,704 feet below sea level. Find the difference in elevation between those two cities. 16) _____

- A) 5437 ft B) 28,071 ft C) 27,971 ft D) 5537 ft

Solve the equation.

17) $3(6x + 8) = 19x$

- A) -8 B) 24 C) 8 D) -24

18) $-2(x + 2) - 12 = -6 - 2$

- A) 4 B) 2 C) -2 D) -4

Write the phrase as a variable expression. Use x to represent "a number."

- 19) The quotient of 23 times a number and -2

- A) $\frac{1}{-46x}$ B) $23x + 2$ C) $\frac{23x}{-2}$ D) $23x - 2$

Solve the equation.

20) $5(x + 1) - 8 = -8 + 4x$

- A) 1 B) -11 C) -5 D) 5

Solve the equation by first multiplying both sides through by an appropriate power of 10 so that the equation contains integers only.

21) $0.1x + 0.5 = -0.4$

- A) -9 B) -0.9 C) -1 D) 1

Use the commutative and associative properties to simplify the expression.

22) $-6 + (5x - 6)$

- A) $6x$ B) $-12x - 6$ C) $-12 + 5x$ D) $36 + 5x$

Use an associative property to complete the statement.

23) $7 \cdot (bx) =$ 23) _____
A) $(bx) \cdot 7$ B) $7 + (bx)$ C) $(7b) \cdot x$ D) $7 \cdot (xb)$

Solve the equation for the indicated variable.

24) $P = a + b + c$ for b 24) _____
A) $b = a + c - P$ B) $b = P + a + c$ C) $b = P + a - c$ D) $b = P - a - c$

Solve the equation.

25) $\frac{3(x-7)}{4} = x + 4$ 25) _____
A) 37 B) -37 C) -13 D) -25

Solve.

26) It took Sara's mother 8 hours round trip to drive to the University and bring Sara back home for spring break. If the University is 168 miles from home, find her mother's average speed. 26) _____
A) 43 mph B) $55\frac{1}{2}$ mph C) 21 mph D) 42 mph

Perform the indicated operation and write the answer in simplest form.

27) $\frac{1}{6} - \frac{13}{x}$ 27) _____
A) $\frac{1-78x}{6x}$ B) $\frac{x-78}{6x}$ C) $\frac{x-13}{6x}$ D) $\frac{x-78}{6}$

Add or subtract as indicated. Write the answer in simplest form.

28) $9 - \frac{y}{11}$ 28) _____
A) $\frac{99-9y}{11}$ B) $\frac{99-y}{11}$ C) $\frac{9-y}{11}$ D) $\frac{11-9y}{11}$

Solve.

29) You have taken up gardening for relaxation and have decided to fence in your new rectangular shaped masterpiece. The length of the garden is 4 meters and 36 meters of fencing is required to completely enclose it. What is the width of the garden? 29) _____
A) 14 m B) 144 m C) 28 m D) 9 m

30) Find the value of L if $P = 24$ and $W = 7$ in the formula $P = 2L + 2W$. 30) _____
A) 12 B) 17 C) 5 D) 8.5

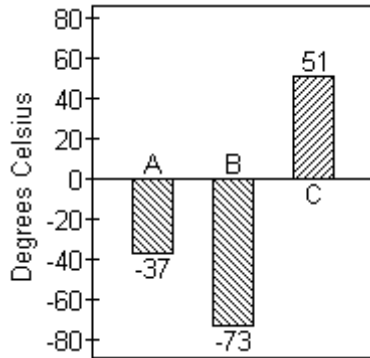
Solve the problem.

31) There are 10 more sophomores than juniors in an 8 AM algebra class. If there are 110 students in this class, find the number of sophomores and the number of juniors in the class. 31) _____
A) 110 sophomores; 100 juniors B) 60 sophomores; 50 juniors
C) 120 sophomores; 100 juniors D) 50 sophomores; 60 juniors

Solve.

- 32) A football team lost 8 yards on each of two consecutive plays. Represent the total loss as product of signed numbers and find the total loss. 32) _____
- A) $2 + (-8) = -6$ yds; 6 yard loss
B) $2 \cdot (-8) = -18$ yds; 18 yard loss
C) $2 \cdot (-8) = -16$ yds; 16 yard loss
D) $8 - 2 = 6$ yds; 6 yard loss

- 33) The graph shows the melting points in degrees Celsius of three compounds: Compound A, Compound B and Compound C. 33) _____

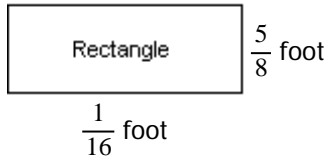


The melting point of Compound D is -1 times the melting point of Compound C. Find the melting point of Compound D.

- A) -51°C B) 102°C C) 0°C D) 51°C

Find the perimeter and area of the figure.

- 34) 34) _____



- A) perimeter: $1\frac{3}{8}$ in; area: $\frac{5}{128}$ sq ft; B) perimeter: $1\frac{3}{8}$ ft; area: $\frac{5}{128}$ sq ft
C) perimeter: $\frac{11}{16}$ ft; area: $\frac{2}{5}$ sq ft D) perimeter: $1\frac{3}{8}$ ft; area: $\frac{1}{25}$ sq ft

Answer Key

Testname: MAT0022 MIDTERM REVIEW

- 1) B
- 2) C
- 3) D
- 4) C
- 5) A
- 6) C
- 7) B
- 8) D
- 9) A
- 10) A
- 11) D
- 12) A
- 13) B
- 14) D
- 15) D
- 16) C
- 17) B
- 18) D
- 19) C
- 20) C
- 21) A
- 22) C
- 23) C
- 24) D
- 25) B
- 26) D
- 27) B
- 28) B
- 29) A
- 30) C
- 31) B
- 32) C
- 33) A
- 34) B