Pre-Algebra Exam Review
Review for Part 2: You may use a calculator to solve these problems.

Name___________________________________

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

Solve the problem.

1) A company’s profit amounted to 25% of its sales. If the profits were $6 million, then what was the total of the company’s sales?
   A) $22 million  B) $24 million  C) $26 million  D) $25 million

2) A bakery sold 31 pies for $4.02 each. What was the total amount of the sale?
   A) $125.72  B) $124.63  C) $124.72  D) $124.62

3) You borrow $6000 from a friend, agreeing to pay 7% simple interest on the loan. If you promise to pay the entire amount back after 2 years, how much money must you pay at that time?
   A) $6830  B) $6890  C) $6840  D) $7240

4) 105 students attended an assembly at Piper School. The student enrollment at the school is 420. What percentage of the students did not attend the assembly?
   A) 85%  B) 70%  C) 60%  D) 75%

5) The distance from the downtown station to the last stop on a commuter railroad line is 22.1 miles. The distance between stops is about 1.7 miles. How many stops are there?
   A) 14 stops  B) 13 stops  C) 12 stops  D) 6 stops

6) June has a strip of paper 24.5 inches long. She wants to cut it into strips that are 3.5 inches long. How many 3.5-inch strips will she get from the paper?
   A) 70 pieces  B) 6 pieces  C) 8 pieces  D) 7 pieces

7) The First Commerce Bank pays $6\frac{1}{3}$% interest per year on money market accounts. What is the annual income on a money market account of $78,200? Round to the nearest dollar.
   A) $130,333  B) $49,530  C) $4953  D) $1,303,333

8) The sales tax on the purchase of a gold bracelet is $71.50. If the bracelet costs $1300 not including sales tax, what is the sales tax rate?
   A) 5.5%  B) 55%  C) 71.5%  D) 10%
9) Mr. and Mrs. Gutierrez borrow $8700 to buy a new car. The loan is to be paid off in 29 equal monthly payments. How much is each payment?

A) $8729  B) $30  C) $300  D) $8671

10) Find the distance around (perimeter of) the figure below.

2.09 feet

4.2 feet

2.09 feet

A) 8.778 feet  B) 6.29 feet  C) 12.58 feet  D) 5.02 feet

11) A spreadsheet contains 768 entries in a rectangular array which has 32 rows. How many entries are in each row?

A) 24  B) 34  C) 736  D) 24,576

12) normal body temperature is this?

A) 5.0 degrees  B) 4.0 degrees  C) 4.1 degrees  D) 5.1 degrees

13) Bill wanted to compare car insurance rates to find out the average amount he should pay for car insurance. If he looked at four different companies and the monthly rates were $164, $107, $131, and $98, what is the average monthly rate of car insurance?

A) $119  B) $150  C) $125  D) $98

Find perimeter of figure.

14)  

9 \frac{1}{2} \text{ cm}

9 \frac{1}{2} \text{ cm}

A) 19 cm  B) 38 cm  C) 29 cm  D) 9 \frac{1}{2} \text{ cm}

Find area of figure.

15) Find the area of a square measuring 20.8 m on a side.

A) 432.64 m²  B) 83.2 m²  C) 865.28 m²  D) 41.6 m²
Use a calculator to solve.

16) You have agreed to purchase a washer and dryer for $1120 including installation and taxes. You also agree to make a down payment of $156 and pay the balance in four payments. How much is each of the four payments?

A) $1130  B) $241  C) $319  D) $146

Find area of circle. (Use 3.14 for π)

17) Find the area. Use 3.14 for π.

![Circle with radius 39 inches]

A) 244.92 in.²  B) 1193.985 in.²  C) 122.46 in.²  D) 4775.94 in.²

Find the circumference of the circle. Use 3.14 or $\frac{22}{7}$ for π as indicated.

18) Find the circumference. Use 3.14 for π.

![Circle with radius 6.5 feet]

A) 20.410 ft  B) 8.255 ft  C) 132.665 ft  D) 40.82 ft

Choose a strategy and solve.

19) You are planning a driving vacation, and you want to estimate the cost of the gas. While on vacation, you are planning to drive 2500 miles. Your car gets about 25 miles per gallon, and you estimate that the cost of gas is $2.85 per gallon. What is your estimate for the cost of the gasoline for the vacation?

A) $237.39  B) $877.00  C) $285.00  D) $2,192.98

Solve. Write your answer in simplest form.

20) A nail $\frac{3}{4}$ inches long is driven into a board $\frac{1}{2}$ inches thick. How much of the nail protrudes from the other side of the board?

A) $\frac{1}{4}$ inch(es)  B) $\frac{1}{12}$ inch  C) $\frac{1}{5}$ inch(es)  D) 3 inch(es)
21) A rubber ice-hockey puck has a 3.3 in. diameter. What is the area of its surface? (Use 3.14 for π.)
   A) 8.54865 in.²    B) 34.1946 in.²    C) 10.362 in.²    D) 4.274325 in.²

22) Find the total area of the roof of the garage. (Note that each half of the roof is a rectangle.)

   A) 168 ft²    B) 252 ft²    C) 84 ft²    D) 38 ft²

23) A photograph measuring 6 in. by $8\frac{1}{2}$ in. is put in a frame measuring $6\frac{1}{2}$ in. by 9 in. What is the area of the border around the photo?
   A) 7 in.²    B) $6\frac{1}{2}$ in.²    C) 8 in.²    D) $7\frac{1}{2}$ in.²

Find the area of the shaded region.

24)

   A) 199 square feet    B) 189 square feet    C) 485 square feet    D) 477 square feet

25) Emily owns 17 acres of land which she rents to a rancher for $1382 per acre per year. Her property taxes are $941 per acre per year. How much profit does she make on the land each year?
   A) $7497    B) $445.00    C) $23,494    D) $39,491
26) Last week, Samantha ran 21 miles. This week, she ran $19\frac{4}{5}$ miles. How much more did she run last week than she ran this week?

A) 24 miles  
B) $1\frac{1}{5}$ miles  
C) $2\frac{1}{5}$ miles  
D) 5 miles

27) A notebook contains 30 sheets of paper (each $\frac{1}{100}$ inch thick), 2 pieces of cardboard (each $\frac{1}{16}$ inch thick), and a front and back cover (each $\frac{1}{4}$ inch thick). What is the total thickness of the notebook?

A) $\frac{37}{40}$ inch  
B) $\frac{27}{40}$ inch  
C) $1\frac{3}{40}$ inches  
D) $\frac{17}{60}$ inch
Answer Key
Testname: PART2 PRE_ALG EXAM REVIEW

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