Basic Algebra Questions

1. If Lynn can type a page in p minutes, what piece of the page can she do in 5 minutes?

A. 5/p
B. p - 5
C. p + 5
D. p/5
E. 1- p + 5

2. If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for both of them to paint the house together?

A. 2 hours and 24 minutes
B. 3 hours and 12 minutes
C. 3 hours and 44 minutes
D. 4 hours and 10 minutes
E. 4 hours and 33 minutes

3. Employees of a discount appliance store receive an additional 20% off of the lowest price on an item. If an employee purchases a dishwasher during a 15% off sale, how much will he pay if the dishwasher originally cost $450?

A. $280.90
B. $287
C. $292.50
D. $306
E. $333.89

4. The sales price of a car is $12,590, which is 20% off the original price. What is the original price?

A. $14,310.40
B. $14,990.90
C. $15,290.70
D. $15,737.50
E. $16,935.80

5. Solve the following equation for A : 2A/3 = 8 + 4A

A. -2.4
B. 2.4
C. 1.3
D. -1.3
E. 0

6. If Leah is 6 years older than Sue, and John is 5 years older than Leah, and the total of their ages is 41. Then how old is Sue?

A. 8
B. 10
C. 14

D. 19
E. 21

7. Alfred wants to invest $4,000 at 6% simple interest rate for 5 years. How much interest will he receive?

A. $240
B. $480
C. $720
D. $960
E. $1,200

8. Jim is able to sell a hand-carved statue for $670 which was a 35% profit over his cost. How much did the statue originally cost him?

A. $496.30
B. $512.40
C. $555.40
D. $574.90
E. $588.20

9. The city council has decided to add a 0.3% tax on motel and hotel rooms. If a traveler spends the night in a motel room that costs $55 before taxes, how much will the city receive in taxes from him?

A. 10 cents
B. 11 cents
C. 15 cents
D. 17 cents
E. 21 cents

10. A student receives his grade report from a local community college, but the GPA is smudged. He took the following classes: a 2 hour credit art, a 3 hour credit history, a 4 hour credit science course, a 3 hour credit mathematics course, and a 1 hour science lab. He received a "B" in the art class, an "A" in the history class, a "C" in the science class, a "B" in the mathematics class, and an "A" in the science lab. What was his GPA if the letter grades are based on a 4 point scale? (A=4, B=3, C=2, D=1, F=0)

A. 2.7
B. 2.8
C. 3.0
D. 3.1
E. 3.2

11. Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of $10 and time and ½ for any hours worked over 8 in a day. How much did Simon get paid?

A. $120.25
B. $160.75
C. $173.75
D. $180
E. $182.50

12. Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?

A. 4
B. 8
C. 12
D. 13
E. 16

13. If r = 5 z then 15 z = 3 y, then r =

A. y
B. 2 y
C. 5 y
D. 10 y
E. 15 y

14. If 300 jellybeans cost you x dollars. How many jellybeans can you purchase for 50 cents at the same rate?

A. 150/x
B. 150x
C. 6x
D. 1500/x
E. 600x

15. Lee worked 22 hours this week and made $132. If she works 15 hours next week at the same pay rate, how much will she make?

A. $57
B. $90
C. $104
D. $112
E. $122

16. If 8x + 5x + 2x + 4x = 114, the 5x + 3 =

A. 12
B. 25
C. 33
D. 47
E. 86

17. You need to purchase a textbook for nursing school. The book cost $80.00, and the sales tax where you are purchasing the book is 8.25%. You have $100. How much change will you receive back?

A. $5.20
B. $7.35
C. $13.40
D. $19.95
E. $21.25

18. You purchase a car making a down payment of $3,000 and 6 monthly payments of $225. How much have you paid so far for the car?

A. $3225
B. $4350
C. $5375
D. $6550
E. $6398

19. Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are purchased in sets of 6 for $2.35 per pack. Staplers are sold in sets of 2 for 12.95. How much will purchasing these products cost?

A. $132.85
B. $145.75
C. $162.90
D. $225.25
E. $226.75

20. If y = 3, then $y^3(y^3-y)=$

A. 300
B. 459
C. 648
D. 999
E. 1099