Chapter 2

Word Problems

GED Mathematics pp. 51–74
Complete GED pp. 702–710

Basic Skills

Directions: For problems 1–10, first identify the operation or operations that you need to use to solve each problem. Write *add, subtract, multiply, divide,* or some combination of these operations. Then solve each problem.

1. In 1990 the population of Northport was 12,783. In 2000 the population of Northport was 14,296. How many more people lived in Northport in 2000 than in 1990?

   Operation:

   Solution:

2. The population of Middletown was 46,597 in 2000. By 2001 the population of Middletown had increased by 948 people. What was the population of Middletown in 2001?

   Operation:

   Solution:

3. A souvenir T-shirt sells for $7.99. Find the price of a dozen T-shirts.

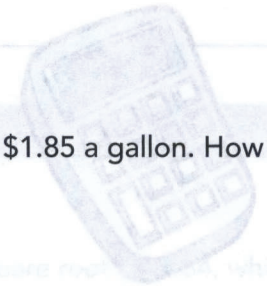
   Operation:

   Solution:

4. Frances paid $5.37 for 3 pounds of pork. What was the price of 1 pound of pork?

   Operation:

   Solution:



5. Sam bought 8 gallons of gasoline that cost $1.85 a gallon. How much change did he get from $20?

   Operation:

   Solution:

6. To get to his daughter's house, Rex drove 265 miles on Friday, 418 miles on Saturday, and 170 miles on Sunday. How far did Rex drive to get to his daughter's house?

   Operation:

   Solution:

7. Mel and Pam need $17,500 as a down payment for a house. So far they have saved $14,300. How much more do they need for the down payment?

   Operation:

   Solution:

8. Shirley drove 221 miles on 13 gallons of gasoline. Find her average gas mileage in miles per gallon.

   Operation:

   Solution:

9. Phil had scores of 65, 88, 79, and 92 on math quizzes last semester. Find his average score on the quizzes.

   Operation:

   Solution:

10. Lorraine's gross weekly salary is $682.40. Her employer deducts $102.36 from her check each week. Find Lorraine's net weekly salary.

    Operation:

    Solution:

For problems 11–15, choose the correct method for solving each problem.

11. You know Mr. Chan's monthly income, and you know Mrs. Chan's monthly income. How do you find their combined income?

(1) Divide the larger income by the smaller income.
(2) Subtract their incomes.
(3) Add their incomes.

12. You know how many yards of cloth a tailor needs to make a jacket, and you know how many yards of material he has. How do you find the number of jackets he can make from the amount of cloth that he has?

(1) Divide the amount of cloth the tailor has by the amount he needs for one jacket.
(2) Multiply the amount of cloth the tailor needs for one jacket by the total amount of cloth the tailor has.
(3) Subtract the amount of cloth the tailor needs for one jacket from the total amount of cloth the tailor has.

13. You know the average speed that Marcia walks, and you know the length of time it takes her to walk to work. How do you find the total distance that Marcia walks to work?

(1) Add her average speed to the time she walks.
(2) Multiply her average speed by the time she walks.
(3) Divide her average speed by the time she walks.

14. You know the price of a movie ticket, and you know the number of seats in a movie theater. How do you find the total amount paid for movie tickets when the theater is full?

(1) Multiply the price of a ticket by the number of seats.
(2) Divide the number of seats by the price of a ticket.
(3) Subtract the price of a ticket from the number of seats.

15. You know Max's weight last year, and you know the amount of weight he has lost since then. How do you find Max's current weight?

(1) Add the weight he lost to his weight last year.
(2) Divide his weight last year by the weight he lost.
(3) Subtract the weight he lost from his weight last year.

For problems 16–20, each problem has more numerical information than is necessary to solve the problem. First identify the unnecessary information. Then solve each problem.

16. Eight co-workers each paid $20 to buy lottery tickets. They agreed to share any winnings equally. The co-workers won a prize of $10,000. How much did each worker get?

Unnecessary information:

Solution:

17. The Andersons pay $814 a month for their mortgage and $117 a month for their car. How much do they pay in a year for their mortgage?

Unnecessary information:

Solution:

18. A volunteer fire department mailed 1000 requests for donations to renovate their firehouse. The firemen received $14,720 from 640 donors. What was the average donation?

Unnecessary information:

Solution:

19. José loaded 3 crates weighing a total of 2750 pounds onto an elevator that can safely carry 3000 pounds. How much more weight can the elevator carry?

Unnecessary information:

Solution:

20. In 1997 the Roberts family spent $790 to heat their house. In 1999 they spent $1265, and in 2001 they spent $1410. By how much did the cost of heating their house rise from 1997 to 2001?

Unnecessary information:

Solution:

For problems 21–25, choose the expression for calculating the best estimate to each problem. Then find the exact answer.

21. A train traveled for 18 hours at an average speed of 72 mph. How far did the train travel?

(1) 100×12
(2) 70×20
(3) 80×10

Solution:

22. Find the cost of four pairs of children's jeans that cost $14.79 each.

(1) $4 \times \$10$
(2) $4 \times \$12$
(3) $4 \times \$15$

Solution:

23. The total distance from Mary's house to her summer cabin is 719 miles. On her way to the cabin, Mary stopped for lunch after driving 189 miles. How many more miles did she need to drive to reach the cabin?

(1) $700 - 200$
(2) $800 - 200$
(3) $1000 - 100$

Solution:

24. On Friday 2683 people attended a basketball tournament, and on Saturday 3127 people attended the tournament. What was the average attendance for those days?

(1) $\frac{2000 + 3000}{2}$
(2) $\frac{3000 + 3000}{2}$
(3) $\frac{4000 + 3000}{2}$

Solution:

25. When Jack started as a part-time worker at Apex, he made $6,945 a year. Now, as a manager, he makes $41,670 a year. His salary now is how many times his starting salary?

(1) $\frac{\$42,000}{\$7,000}$
(2) $\frac{\$40,000}{\$5,000}$
(3) $\frac{\$40,000}{\$8,000}$

Solution:

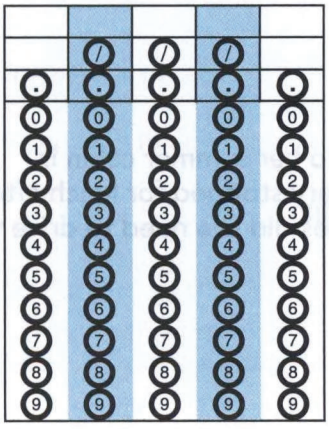
Answers are on page 132.

GED PRACTICE

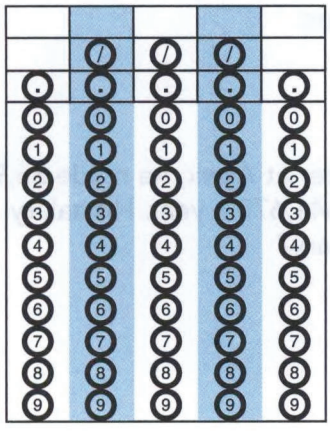
PART I

Directions: Use a calculator to solve the following problems. For problems 1–3, mark each answer on the corresponding number grid.

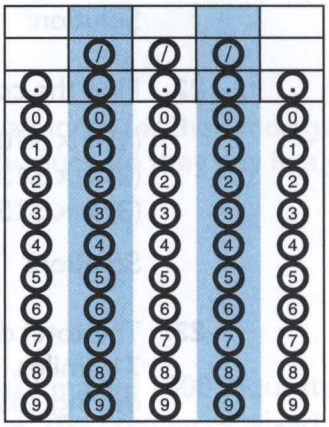
1. Driving on highways, Victoria gets an average of 28 miles on 1 gallon of gasoline. How far can she drive on the highway with a full tank that holds 14 gallons of gasoline?



2. At the Elton Machine Corporation there are 228 employees in the 8:00 A.M. to 4:00 P.M. shift, 197 employees on the 4:00 P.M. to midnight shift, and 146 employees on the midnight to 8:00 A.M. shift. Altogether, how many people work at Elton Machine?



3. A printer has to ship new telephone books to 14,112 residential customers. The books are packed in bundles of 12. How many bundles are required to ship the entire order?



Choose the correct answer to each problem.

4. In a recent year the most popular Internet guide to Philadelphia had 181,000 visitors. The second-most popular guide had 79,000 visitors. How many more people visited the most popular site than visited the second-most popular site?

(1) 92,000
(2) 98,000
(3) 102,000
(4) 108,000
(5) 112,000

5. A cartridge for a laser printer costs $73.99 for one or $71.79 each if you buy three or more. Find the cost of six cartridges at the discounted price.

(1) $430.74
(2) $433.94
(3) $437.85
(4) $443.94
(5) $440.74

6. According to the Census Bureau, the population of Seattle increased from 4,987,000 in 1990 to 5,894,000 in 2000. By how many people did the population increase from 1990 to 2000?

(1) 197,000
(2) 907,000
(3) 917,000
(4) 927,000
(5) 987,000

7. Joan takes care of her father's bills. At the beginning of April, his checking account had a balance of $1084.27. Joan paid her father's rent of $475.00. Then she deposited his pension check for $396.40. Finally, she paid the telephone bill for $49.58. How much was left in the account after she paid the phone bill?

(1) $ 956.09
(2) $1005.67
(3) $1056.09
(4) $1105.67
(5) $1136.09

8. To build an addition to a community athletic facility, a town needs to raise $1,500,000. So far the residents have raised $768,520 toward the new construction. How much more do they need?

(1) $831,480
(2) $768,520
(3) $731,480
(4) $668,520
(5) $631,480

9. Maxine can type 65 words per minute. How many minutes will she need to type a document that contains 2600 words?

(1) 25
(2) 30
(3) 35
(4) 40
(5) 45

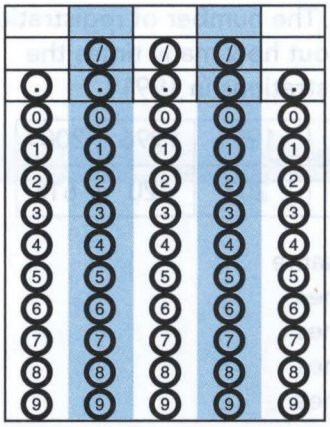
10. Find the total cost of 3 pounds of beef at $3.90 a pound and 4 pounds of fish at $7.89 a pound.

(1) $27.30
(2) $29.43
(3) $31.56
(4) $43.26
(5) $55.23

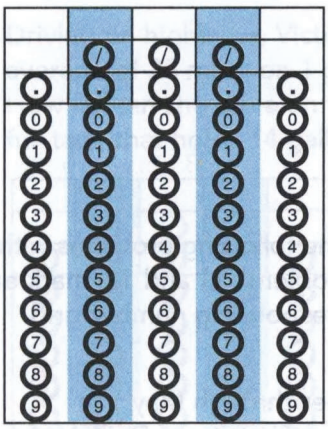
PART II

Directions: Solve the following problems without a calculator. For problems 11 and 12, mark each answer on the corresponding number grid.

11. From September through May, the publishers of the *Shoretown Daily News* print 2850 copies of their newspaper daily. During the summer months, they print 6000 copies daily. How many more copies are printed each day in the summer than are printed each day for the rest of the year?



12. Melanie bought a new dining table and a set of chairs. She purchased the furniture on an installment plan by paying $200 down and $36 a month for a full year. What total price, in dollars, did Melanie pay for the furniture?



Choose the correct answer to each problem.

13. The table shows the number of registrations in the Midvale night school classes for three different years. The number of registrations in 2001 was about how many times the number of registrations in 1991?

Year	1991	1996	2001
Registrations	203	420	615

(1) about the same
(2) about 2 times
(3) about 3 times
(4) about 4 times
(5) about 5 times

14. Selma drove for 4 hours on an interstate highway at an average speed of 68 mph and then for another hour in a city at an average speed of 17 mph. Which expression represents the total distance Selma drove in those 5 hours?

(1) $68 \times 4 - 17$
(2) $68 \times 4 + 17$
(3) 68×5
(4) $5(68 + 17)$
(5) $5(68 - 17)$

15. In a recent year the number of households in Baltimore was 255,772. To estimate the actual population, a local politician assumed that the average household was about three people. Assuming that the politician was correct, which of the following is the best guess of the population of Baltimore that year?

(1) about 2 million
(2) about 1 million
(3) about 750,000
(4) about 500,000
(5) about 250,000

16. According to a study, in 1992 the average resident of Atlanta lost 25 hours a year while waiting in traffic jams. In 1999 the average resident of Atlanta lost 53 hours while waiting in traffic jams. The average Atlanta resident lost how many more hours in traffic jams in 1999 than in 1992?

(1) 12
(2) 18
(3) 20
(4) 23
(5) 28

Problems 17–19 refer to the following information.

One-Way Fare from New York to	
Chicago	$152
Honolulu	$359
Los Angeles	$219
Paris	$304

17. According to the list, how much is round-trip airfare from New York to Honolulu?

(1) $304
(2) $359
(3) $438
(4) $608
(5) $718

18. Round-trip airfare from New York to Los Angeles is how much more than round-trip airfare from New York to Chicago?

(1) $ 67
(2) $134
(3) $140
(4) $167
(5) $304

19. One-way airfare from New York to Paris is how many times the cost of one-way airfare from New York to Chicago?

(1) the same
(2) 2 times
(3) 3 times
(4) 4 times
(5) 5 times

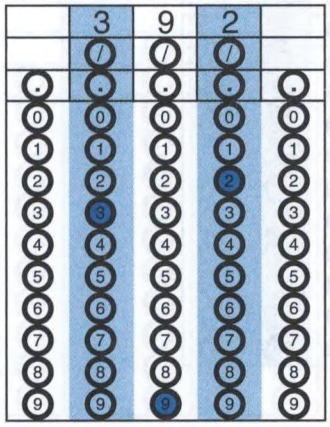
20. Rick drove 500 miles in 13 hours. To the nearest ten, what was his average driving speed in miles per hour?

(1) 20
(2) 30
(3) 40
(4) 50
(5) 60

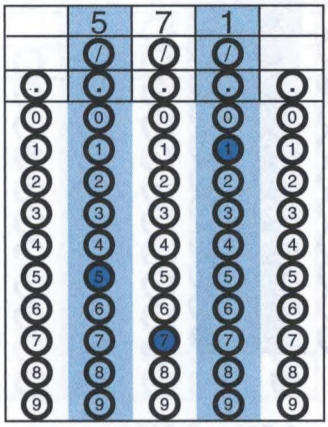
Answers are on page 133.

GED Practice, Part I, page 32

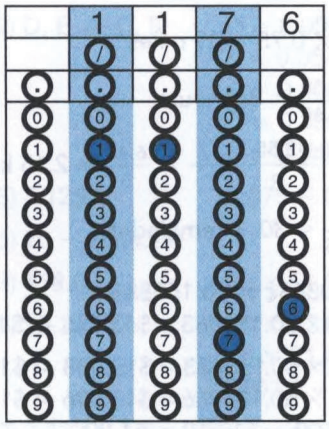
1. 392 $28 \times 14 = 392$ miles



2. 571 $228 + 197 + 146 = 571$ employees



3. 1176 $14{,}112 \div 12 = 1176$ bundles



4. (3) 102,000 $181{,}000 - 79{,}000 = 102{,}000$

5. (1) $430.74 $6 \times \$71.79 = \$430.74$

6. (2) 907,000 $5{,}894{,}000 - 4{,}987{,}000 = 907{,}000$

7. (1) $956.09

$\$1084.27 - \$475 + \$396.40 - \$49.58 = \$956.09$

8. (3) $731,480 $\$1{,}500{,}000 - \$768{,}520 = \$731{,}480$

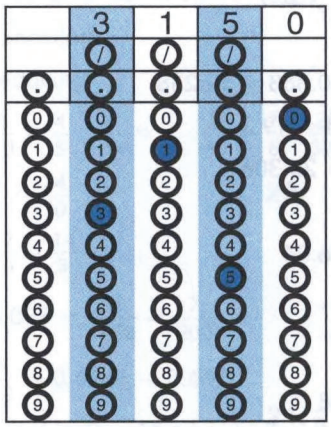
9. (4) 40 $\frac{2600}{65} = 40$ minutes

10. (4) $43.26

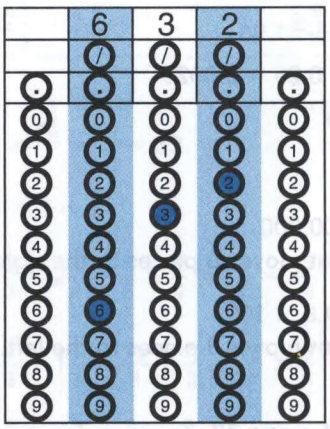
$3 \times \$3.90 + 4 \times \$7.89 = \$11.70 + \$31.56 = \$43.26$

GED Practice, Part II, page 33

11. 3150 $6000 - 2850 = 3150$



12. 632 $\$200 + 12 \times \$36 = \$200 + \$432 = \$632$



13. (3) about 3 times $\frac{615}{203} \approx 3$

14. (2) $68 \times 4 + 17$

$d = rt = 68 \times 4 + 1 \times 17 = 68 \times 4 + 17$

15. (3) about 750,000 255,772 is close to 250,000.
$250{,}000 \times 3 = 750{,}000$

16. (5) 28 $53 - 25 = 28$

17. (5) $718 $2 \times \$359 = \$718$

18. (2) $134

$2 \times \$219 - 2 \times \$152 = \$438 - \$304 = \$134$

19. (2) 2 times $\frac{\$304}{152} = 2$

20. (3) 40 $\frac{500}{13} = 38 +$ remainder $\rightarrow 40$