



Chapter 1

Whole Numbers

GED Mathematics pp. 17–50
Complete GED pp. 697–701, 711–713

Basic Skills

Directions: Use the following list of words to fill in the blanks for problems 1–10.

difference	product	quotient	sum
mean	median	power	square root
even	odd	prime	consecutive

1. The answer to a division problem is called the _____.
2. The answer to a subtraction problem is called the _____.
3. The answer to a multiplication problem is called the _____.
4. The answer to an addition problem is called the _____.
5. A number that 2 divides into with no remainder is called an _____ number.
6. A number that can be divided evenly only by 1 and itself is called a _____ number.
7. The sum of a group of numbers divided by the number of numbers in the group is called the _____.
8. When you multiply a number by itself, you raise the number to the second _____.
9. When you add 1 to a number, you find the next _____ number.
10. The middle value for a group of numbers is called the _____.

Solve each problem.

11. Circle the even numbers in this list. 8 13 20 27 35
12. Circle the odd numbers in this list. 9 14 23 31 42
13. List the prime numbers between 15 and 30.
14. In the number 25,308, which digit is in the ten thousands place?
15. In the number 846,571, which digit is in the thousands place?
16. Round each number in this list to the nearest ten.
83 129 3472 5019
17. Round each number in this list to the nearest hundred.
274 6386 10,987 4926
18. Find the difference between 9078 and 8949.
19. What is the product of 8300 and 46?
20. Find the quotient of $7291 \div 23$.
21. For the problem $88 + 721 + 4068$, round each number to the nearest ten. Then add the rounded numbers.
22. For the problem $168,274 - 43,916$, round each number to the nearest thousand. Then subtract the rounded numbers.
23. For the problem 748×59 , round each number to the left-most digit. Then multiply the rounded numbers.
24. Find the quotient, to the nearest hundred, of 33,540 divided by 48.
25. Evaluate 17^2 .
26. What is $\sqrt{400}$?
27. Evaluate the expression $3 \times 17 - 9 \times 2$.
28. Find the next term in the sequence 1, 6, 4, 9, 7, ...
29. Find the mean for the numbers 71, 46, 98, and 53.
30. What is the median for the numbers in the last problem?

Answers are on page 131.

GED PRACTICE

PART I

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

1. What is the quotient of 220,320 divided by 720?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

2. Round each number below to the nearest hundred. Then find the sum of the rounded numbers. 1285, 817, and 2073

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

3. Round 92 and 79 to the nearest ten. Then find the product of the rounded numbers.

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Choose the correct answer to each problem.

4. Which of the following is equivalent to 18^3 ?

- (1) $18 + 18 + 18$
- (2) 3×18
- (3) $18 - 18 - 18$
- (4) $18 \times 18 \times 18$
- (5) $18 \div 3$

5. What is 48^2 ?

- (1) 96
- (2) 960
- (3) 2304
- (4) 3024
- (5) 9600

6. What is the next term in the sequence 5, 15, 10, 30, 25 . . .

- (1) 30
- (2) 40
- (3) 50
- (4) 75
- (5) 90

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7. Simplify the expression $\frac{4 \times 30}{26 - 16}$.

- (1) 10
- (2) 12
- (3) 20
- (4) 24
- (5) 30

8. Lou took five math tests. His scores were 81, 78, 93, 86, and 72. What was his median score?

- (1) 78
- (2) 80
- (3) 81
- (4) 82
- (5) 86

9. Maria's office bought new equipment in 1998. The table below shows the estimated value of the equipment each year since it was purchased. If the pattern continued, what was the value of the equipment in 2002?

Year	1998	1999	2000	2001	2002
Value in \$	3000	2600	2200	1800	?

- (1) \$1400
- (2) \$1380
- (3) \$1200
- (4) \$1140
- (5) \$1000

10. Bettina works weekends as a waitress. On Friday she made \$219 in tips. On Saturday she made \$217, and on Sunday she made \$185. Find her average daily tips for the weekend.

- (1) \$201
- (2) \$207
- (3) \$210
- (4) \$217
- (5) \$219

PART II

Directions: Solve the following problems without a calculator.

11. The answer to $2,764 + 1,814 + 16,285$ is between which of the following pairs of numbers?

- (1) 5,000 and 10,000
- (2) 10,000 and 15,000
- (3) 15,000 and 20,000
- (4) 20,000 and 25,000
- (5) 25,000 and 30,000

12. The answer to 83^2 is between which of the following pairs of numbers?

- (1) 1600 and 2500
- (2) 2500 and 3600
- (3) 3600 and 4900
- (4) 4900 and 6400
- (5) 6400 and 8100

13. Which of the following is the same as $6(5 + 7)$?

- (1) $6 \times 5 \times 7$
- (2) $5(6 + 7)$
- (3) $7(6 + 5)$
- (4) $6 \times 5 + 6 \times 7$
- (5) $6 + 5 + 7$

14. The square root of 5476 is between which of the following pairs of numbers?

- (1) 50 and 60
- (2) 60 and 70
- (3) 70 and 80
- (4) 80 and 90
- (5) 90 and 100

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15. Which of the following is *not* a factor of 40?

- (1) 5
- (2) 8
- (3) 10
- (4) 20
- (5) 25

For problems 16 and 17, mark each answer on the corresponding number grid.

16. Evaluate the expression $\frac{10^3 - 10^2}{8 - 3}$.

	7	7	7	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

17. Evaluate the expression $9(27 + 14)$.

	7	7	7	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

18. If r represents the square root of 5184, which of the following is true?

- (1) $r \times r = 5184$
- (2) $r + r = 5184$
- (3) $r - r = 5184$
- (4) $r \div r = 5184$
- (5) $\frac{r}{2} = 5184$

19. In the last census, the population of New Mexico was 1,819,046. What was the population rounded to the nearest ten thousand?

- (1) 2,000,000
- (2) 1,820,000
- (3) 1,819,000
- (4) 1,810,000
- (5) 1,800,000

20. You know Yolanda's scores on four Spanish quizzes. Which of the following best describes the way to find her mean or average score?

- (1) Add the scores.
- (2) Subtract the lowest score from the highest score.
- (3) Find half of each score and add the results.
- (4) Add the scores and divide by four.
- (5) Look for the score with the middle value.



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.

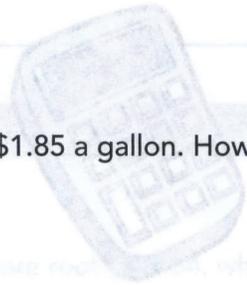
Operation:

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:

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?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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?

	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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.

Answer Key

Chapter 1

Whole Numbers, Basic Skills, page 22

1. quotient **11. 8 20**
2. difference **12. 9 23 31**
3. product **13. 17 19 23 29**
4. sum **14. 2**
5. even **15. 6**
6. prime **16. 80 130 3470 5020**
7. mean **17. 300 6400 11,000 4900**
8. power **18. 129**
9. consecutive **19. 381,800**
10. median **20. 317**

21. 4880 $90 + 720 + 4070 = 4880$
22. 124,000 $168,000 - 44,000 = 124,000$
23. 42,000 $700 \times 60 = 42,000$
24. 700 $\frac{33,540}{48} = 698 + \text{remainder} \rightarrow 700$
25. 289 $17^2 = 17 \times 17 = 289$
26. 20
27. 33 $3 \times 17 - 9 \times 2 = 51 - 18 = 33$
28. 12

$$\begin{array}{cccccc} 1 & 6 & 4 & 9 & 7 & 12 \\ +5 & -2 & +5 & -2 & +5 & \\ \hline 71 & +46 & +98 & +53 & & \\ \hline & 4 & & 4 & & \end{array} = \frac{268}{4} = 67$$
29. 67
30. 62 $46 \underline{53} \underline{71} \underline{98} \quad \frac{53+71}{2} = \frac{124}{2} = 62$

GED Practice, Part I, page 24

1. 306

$$\begin{array}{r} 306 \\ 720 \overline{)220,320} \\ \underline{2160} \\ 4320 \\ \underline{4320} \\ 0 \end{array}$$

	3	0	6
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

2. 4200 $1300 + 800 + 2100 = 4200$

	4	2	0	0
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

3. 7200 $90 \times 80 = 7200$

	7	2	0	0
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

4. (4) $18 \times 18 \times 18$
5. (3) 2304 $48^2 = 48 \times 48 = 2304$
6. (4) 75

$$\begin{array}{cccccc} 5 & 15 & 10 & 30 & 25 & 75 \\ \times 3 & -5 & \times 3 & -5 & \times 3 & \\ \hline & & & & & \end{array}$$
7. (2) 12 $\frac{4 \times 30}{26 - 16} = \frac{120}{10} = 12$
8. (3) 81 $72 \quad 78 \quad \underline{81} \quad 86 \quad 93$
9. (1) \$1400

$$\begin{array}{cccccc} 3000 & 2600 & 2200 & 1800 & 1400 \\ -400 & -400 & -400 & -400 & \\ \hline & & & & \end{array}$$
10. (2) \$207 $\frac{\$219 + \$217 + \$185}{3} = \frac{\$621}{3} = \$207$

GED Practice, Part II, page 25

11. (4) 20,000 and 25,000 Round each number to the nearest thousand.
 $3,000 + 2,000 + 16,000 = 21,000$
12. (5) 6400 and 8100 $80^2 = 6400$ and $90^2 = 8100$

13. (4) $6 \times 5 + 6 \times 7$ This is the distributive property.
14. (3) 70 and 80 $\sqrt{4900} = 70$ and $\sqrt{6400} = 80$
15. (5) 25 The other numbers divide evenly into 40.
16. 180 $\frac{10^3 - 10^2}{8 - 3} = \frac{1000 - 100}{5} = \frac{900}{5} = 180$

	1	8	0	
	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

17. 369 $9(27 + 14) = 9(41) = 369$

	3	6	9	
	/	/	/	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

18. (1) $r \times r = 5184$
19. (2) 1,820,000 $1,819,046 \rightarrow 1,820,000$
20. (4) Add the scores and divide by four.

Chapter 2

Basic Skills, page 27

- Operation: subtract
Solution: $14,296 - 12,783 = 1,513$ people
- Operation: add
Solution: $46,597 + 948 = 47,545$ people
- Operation: multiply
Solution: $12 \times \$7.99 = \95.88
- Operation: divide
Solution: $\$5.37 \div 3 = \1.79
- Operation: multiply and subtract
Solution: $8 \times \$1.85 = \14.80
 $\$20.00 - \$14.80 = \$5.20$
- Operation: add
Solution: $265 + 418 + 170 = 853$ miles
- Operation: subtract
Solution: $\$17,500 - \$14,300 = \$3,200$
- Operation: divide
Solution: $221 \div 13 = 17$ miles per gallon
- Operation: add and divide
Solution: $65 + 88 + 79 + 92 = 324$
 $324 \div 4 = 81$
- Operation: subtract
Solution: $\$682.40 - \$102.36 = \$580.04$
- (3) Add their incomes. *Combined* suggests addition.
- (1) Divide the amount of cloth the tailor has by the amount he needs for one jacket.
- (2) Multiply her average speed by the time she walks. This is the distance formula $d = rt$.
- (1) Multiply the price of a ticket by the number of seats.
- (3) Subtract the weight he lost from his weight last year.
- Unnecessary information: \$20
Solution: $\$10,000 \div 8 = \$1,250$
- Unnecessary information: \$117 a month for the car
Solution: $12 \times \$814 = \9768
- Unnecessary information: 1000 requests
Solution: $\$14,720 \div 640 = \23
- Unnecessary information: 3 crates
Solution: $3000 - 2750 = 250$ pounds
- Unnecessary information: \$1265 in 1999
Solution: $\$1410 - \$790 = \$620$
- (2) 70×20 Solution: $72 \times 18 = 1296$ miles
- (3) $4 \times \$15$ Solution: $4 \times \$14.79 = \59.16
- (1) $700 - 200$ Solution: $719 - 189 = 530$ miles
- (2) $\frac{3000 + 3000}{2}$ Solution: $\frac{2683 + 3127}{2} = \frac{5810}{2} = 2905$
- (1) $\frac{\$42,000}{\$7,000}$ Solution: $\frac{\$41,670}{\$6,945} = 6$

GED Practice, Part I, page 32

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

	3	9	2	
.	/	/	/	.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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

	5	7	1	
.	/	/	/	.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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

	1	1	7	6
.	/	/	/	.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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 $6000 - 2850 = 3150$

	3	1	5	0
.	/	/	/	.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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

	6	3	2	
.	/	/	/	.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

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 $\frac{500}{13} = 38 + \text{remainder} \rightarrow 40$

Chapter 3

Basic Skills, page 36

- 1. 6 7 9 8. 0.4 2.4 36.1
- 2. 5 8 6 9. 1.78 0.03 0.20
- 3. 6 7 9 10. 13 6 129
- 4. hundredths 11. 0.08
- 5. tenths 12. 14.007
- 6. thousandths 13. 3
- 7. 902.735
- 14. $2.15 + 16.72 + 0.368 = 19.238$
- 15. $2.2 + 16.7 + 0.4 = 19.3$
- 16. $28.726 - 3.42 = 25.306$
- 17. $29 - 3 = 26$
- 18. $32.6 \times 5.4 = 176.04$
- 19. $33 \times 5 = 165$
- 20. $\frac{0.56}{7} = 0.08$
- 21. $4.56 \div 12 = 0.38$
- 22. $2.844 \div 0.36 = 7.9$
- 23. $15 \div 9 = 1.66 \rightarrow .7$
- 24. $25 \div 30 = 0.833 \rightarrow 0.83$
- 25. $(1.4)^2 = 1.4 \times 1.4 = 1.96$
- 26. $(0.25)^2 = 0.25 \times 0.25 = 0.0625$
- 27. $\sqrt{0.0036} = 0.06$
- 28. $\sqrt{0.49} = 0.7$
- 29. $5.9 \times 10^6 = 5,900,000$
The decimal point moves 6 places to the right.
- 30. $480,000,000 = 4.8 \times 10^8$
The decimal point moves 8 places to the left.

GED Practice, Part I, page 38

1. 1.77 $7.11 - 5.34 = 1.77$ million

	1	.	7	7
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

2. 93.1 $19.2 + 73.9 = 93.1$ pounds

	9	3	.	1
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

3. 21.9 $\frac{306}{14} = 21.85 \rightarrow 21.9$ miles

	2	1	.	9
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

- 4. (3) 0.269 $0.5 \times 0.538 = 0.269$ kg
- 5. (4) \$5.04 $0.87 \times \$5.79 = \$5.0373 \rightarrow \$5.04$
- 6. (2) .338 $\frac{27}{80} = .3375 \rightarrow .338$
- 7. (4) 39 $52 \times 0.75 = 39$ miles
- 8. (3) 3.5 $\frac{\$68.60}{\$19.60} = 3.5$ hours
- 9. (1) 2.15 $\frac{1.2 + 2.55 + 2.7}{3} = \frac{6.45}{3} = 2.15$ kg
- 10. (1) 30 $\frac{20}{0.65} = 30 + \text{remainder}$
- 11. (4) \$43.76 $15.0883\text{¢} = \$0.150883$
 $290 \times \$0.150883 = \$43.756 \rightarrow \$43.76$
- 12. (2) \$1.99 $100 \times \$0.150883 = \$15.088 \rightarrow \$15.09$
 $100 \times \$0.130966 = \$13.096 \rightarrow \$13.10$
 $\$15.09 - \$13.10 = \$1.99$

GED Practice, Part II, page 40

13. 32.7 $964.5 - 931.8 = 32.7$ million acres

	3	2	.	7
	/	/	/	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

14. 218.9 $2.189 \times 100 = 218.9$ pounds

2	1	8	.	9
/	/	/	/	
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

15. (1) $30 - 2(12.3)$

16. (3) 750,000 $1.8 - 1.05 = 0.75$ million = 750,000

17. (2) D, E, A, C, B
 D = 0.050
 E = 0.054
 A = 0.400
 C = 0.450
 B = 0.540

18. (3) 1.125 $1.875 - 0.75 = 1.125$ inches

19. (5) $20 - 2.5(4.99)$

20. (3) \$38.00 $20 \times \$1.90 = \38.00

21. (5) \$5.30
 $10 \times \$2.02 = \20.20
 $10 \times \$1.49 = \14.90
 $\$20.20 - \$14.90 = \$5.30$

22. (2) 2.822×10^9 The decimal point moves 9 places to the left.

23. (2) 58,400,000 The decimal point moves 7 places to the right.

24. (3) 584,000 $\frac{58,400,000}{100} = 584,000$

Chapter 4

Basic Skills, page 42

1. numerator 9. common denominators

2. denominator 10. inverse or reciprocal

3. improper 11. $\frac{7}{14} \frac{11}{22} \frac{13}{26}$

4. proper 12. $\frac{7}{9} \frac{4}{7} \frac{8}{13}$

5. mixed number 13. $\frac{5}{12} \frac{7}{20} \frac{7}{24}$

6. raising to higher terms

7. canceling

8. reducing

14. $\frac{8}{10} = \frac{4}{5} \quad \frac{6}{36} = \frac{1}{6} \quad \frac{35}{40} = \frac{7}{8} \quad \frac{20}{300} = \frac{1}{15} \quad \frac{18}{100} = \frac{9}{50}$

15. $\frac{4}{5} = \frac{24}{30}$ 20. $5\frac{1}{2} = 5\frac{4}{8}$

16. $4\frac{2}{3} = \frac{14}{3}$ $6\frac{3}{8} = 6\frac{3}{8}$

17. $0.035 = \frac{35}{1000} = \frac{7}{200}$ $+2\frac{3}{4} = 2\frac{6}{8}$

18. $\frac{5}{12} = 0.4166 \rightarrow 0.417$ $13\frac{13}{8} = 14\frac{5}{8}$

19. $6 + 6 + 3 = 15$ 21. $8 - 3 = 5$

22. $8\frac{1}{3} = 8\frac{4}{12} = 7\frac{4}{12} + \frac{12}{12} = 7\frac{16}{12}$

$-2\frac{3}{4} = 2\frac{9}{12} =$ $2\frac{9}{12}$

$5\frac{7}{12}$

23. $\frac{2}{3} \times \frac{15}{1} = \frac{30}{1} = 30$

24. $2 \times 2 = 4$

25. $1\frac{2}{3} \times 2\frac{1}{4} = \frac{5}{3} \times \frac{9}{4} = \frac{15}{4} = 3\frac{3}{4}$

26. $5\frac{1}{3} \div 1\frac{1}{3} = \frac{16}{3} \div \frac{4}{3} = \frac{16}{3} \times \frac{3}{4} = 4$

27. $(\frac{3}{5})^2 = \frac{3}{5} \times \frac{3}{5} = \frac{9}{25}$

28. $\sqrt{\frac{25}{36}} = \frac{5}{6}$

29. $0.00038 = 3.8 \times 10^{-4}$
 The decimal point moves 4 places to the right.

30. $2.6 \times 10^{-5} = 0.000026$
 The decimal point moves 5 places to the left.

GED Practice, Part I, page 44

1. $\frac{3}{4} \quad 5 - 4\frac{1}{4} = 4\frac{4}{4} - 4\frac{1}{4} = \frac{3}{4}$ ft

	3	/	4	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

2. $\frac{1}{15} \quad \frac{\$200}{\$3000} = \frac{1}{15}$

	1	/	1	5
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

3. $\frac{2}{3} \quad \frac{256}{384} = \frac{2}{3}$

	2	/	3	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

4. (4) 6 $21 \div 3\frac{1}{2} = 21 \div \frac{7}{2} =$

$\frac{3}{1} \times \frac{2}{7} = \frac{6}{7} = 6$

5. (5) \$9400 $\frac{1}{10} \times \frac{94,000}{1} = \9400

6. (3) 16 $12 \div \frac{3}{4} = \frac{12}{1} \times \frac{4}{3} = 16$

7. (5) \$5400 $x = \text{car loan}$

$\frac{2}{3}x = \$3600$

$x = \$3600 \div \frac{2}{3}$

$x = \frac{1800}{2} \times \frac{3}{1} = \5400

8. (2) \$1800 $\$5400 - \$3600 = \$1800$

9. (3) $3\frac{1}{3} \quad \frac{5}{1} \times \frac{2}{3} = \frac{10}{3} = 3\frac{1}{3}$

10. (4) \$6 $\$7.50 \div 1\frac{1}{4} = \$7.50 \div \frac{5}{4} = \cancel{\$7.50}^{1.50} \times \frac{4}{5} = \6

11. (4) $\frac{3}{5} \quad 48 \text{ won} + 32 \text{ lost} = 80 \text{ played}$
 $\frac{48}{80} = \frac{3}{5}$

12. (1) 62 $4 \times 15\frac{1}{2} = \frac{4}{1} \times \frac{31}{2} = 62 \text{ inches}$

13. (2) $4 \times 10^{-3} \quad 0.004 = 4 \times 10^{-3}$

250)1.000

The decimal point moves 3 places to the right.

GED Practice, Part II, page 46

14. $\frac{7}{8} \quad \frac{21}{24} = \frac{7}{8}$

	7	/	8	
.
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

15. $\frac{11}{12} \quad \frac{1}{4} + \frac{1}{3} + \frac{1}{6} + \frac{1}{6} = \frac{3}{12} + \frac{4}{12} + \frac{2}{12} + \frac{2}{12} = \frac{11}{12}$

	1	1	/	1	2
.
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9