Chapter 3

Decimals

Basic Skills

Directions: Solve each problem.

1. Circle the digit in the tenths place in each number.
   2.6   3.714   18.9

2. Circle the digit in the hundredths place in each number.
   0.45   2.986   12.065

3. Circle the digit in the thousandths place in each number.
   0.1265   0.0078   2.1294

For problems 4–6, fill in the blanks with the correct decimal name.

4. 0.16 = sixteen _____.

5. 3.2 = three and two _____.

6. 12.019 = twelve and nineteen _____.

7. Rewrite the number 00902.7350 and omit unnecessary zeros.

8. Round each number to the nearest tenth.
   0.38   2.419   36.083

9. Round each number to the nearest hundredth.
   1.777   0.0284   0.199

10. Round each number to the nearest unit.
    13.099   5.702   128.66

11. Write eight hundredths as a decimal.

12. Write fourteen and seven thousandths as a decimal.

13. In $4.37 which digit is in the tenths place?

14. Find the sum of 2.15, 16.72, and 0.368.

15. For the last problem, round each number to the nearest tenth. Then find the sum of the rounded numbers.

16. Subtract 3.42 from 28.726.

17. For the last problem, round each number to the nearest unit. Then subtract the rounded numbers.

18. Find the product of 32.6 and 5.4.

19. For the last problem, round each number to the nearest unit. Then find the product of the rounded numbers.

20. What is $\frac{0.56}{7}$?

21. Divide 4.56 by 12.

22. Find the quotient of 2.844 divided by 0.36.

23. What is $15 \div 9$ to the nearest tenth?

24. What is $25 \div 30$ to the nearest hundredth?

25. What is $(1.4)^2$?

26. Evaluate $(0.25)^2$.

27. What is $\sqrt{0.0036}$?

28. Evaluate $\sqrt{0.49}$.

29. Write 5.9×10^6 as a whole number.

30. Write 480,000,000 in scientific notation.

Answers are on page 134.

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. There are 7.11 million Internet users in New York City and 5.34 million Internet users in Los Angeles. How many more million Internet users are there in New York City than in Los Angeles?

2. A wooden crate weighs 19.2 pounds, and a generator that will be shipped in the crate weighs 73.9 pounds. What is the combined weight, in pounds, of the crate and the generator?

3. Sam drove 306 miles on 14 gallons of gasoline. To the nearest tenth, how many miles did he drive on one gallon of gasoline?

Choose the correct answer to each problem.

4. A can contains 0.538 kilogram of beans. If half of the beans go into a food processor, what is the weight, in kilograms, of beans in the food processor?

    (1) 0.038
    (2) 0.20
    (3) 0.269
    (4) 0.50
    (5) 0.538

5. What is the cost of 0.87 pound of cheese at $5.79 a pound?

    (1) $4.05
    (2) $4.34
    (3) $4.64
    (4) $5.04
    (5) $5.16

6. A batting average is the number of hits a baseball player gets divided by the number of times he is at bat. The quotient is rounded to the nearest thousandth. Jake was at bat 80 times and got 27 hits. What was his batting average?

    (1) .270
    (2) .338
    (3) .400
    (4) .500
    (5) .540

7. Paula drove at an average speed of 52 mph for 0.75 hour. How many miles did she drive?

    (1) 75
    (2) 52
    (3) 43
    (4) 39
    (5) 31

8. Joan makes $19.60 an hour for overtime work. One week her paycheck included $68.60 for overtime. How many hours did she work overtime that week?

    (1) 2.5
    (2) 3
    (3) 3.5
    (4) 4
    (5) 4.5

9. Find the mean weight, in kilograms, of three parcels that weigh 1.2 kg, 2.55 kg, and 2.7 kg.

    (1) 2.15
    (2) 2.35
    (3) 2.5
    (4) 2.65
    (5) 2.7

10. If a jar contains 0.65 kilogram of plums, how many jars can be filled if you have 20 kilograms of plums?

    (1) 30
    (2) 32
    (3) 34
    (4) 36
    (5) 38

For problems 11 and 12, refer to the following information.

Rates for Electricity	
Commercial	15.0883¢ per kilowatt hour (kWh)
Residential	13.0966¢ per kilowatt hour (kWh)

11. Jason has a cabinet-making shop next to his house. He pays the commercial rate for the electricity that he uses in his shop and the residential rate for the electricity that he uses in his house. One month he used 290 kilowatt hours of electricity in his shop. Find the cost of the electricity that he used in his shop that month.

    (1) $25.61
    (2) $28.01
    (3) $37.98
    (4) $43.76
    (5) $45.82

12. What is the difference between the cost of 100 kilowatt hours of electricity at the commercial rate and 100 kilowatt hours of electricity at the residential rate?

    (1) $0.99
    (2) $1.99
    (3) $2.99
    (4) $4.90
    (5) $9.90

PART II

Directions: Solve the following problems without a calculator. For problems 13 and 14, mark each answer on the corresponding number grid.

13. In 1987, 964.5 million acres of land were used for farming in the U.S. In 1997, the number of acres used for farming was 931.8 million. From 1987 to 1997, the total number of acres used for farming dropped by how many million?

14. What is the total weight, in pounds, of 100 cans of tomatoes if each can weighs 2.189 pounds?

Choose the correct answer to each problem.

15. From a 30-foot-long nylon rope, Tim cut two pieces, each 12.3 meters long. Which expression represents the length, in meters, of the remaining piece of rope?

(1) 30 − 2(12.3)
(2) 2(30 − 12.3)
(3) 2(30) − 12.3
(4) 30 − 12.3
(5) 30 + 2(12.3)

16. The population of Central County rose from 1.05 million people in 1992 to 1.8 million people in 2002. How many more people lived in Central County in 2002 than in 1992?

(1) 7,500,000
(2) 6,500,000
(3) 750,000
(4) 650,000
(5) 250,000

17. The list below tells the lengths, in meters, of five plastic tubes. Arrange the tubes in order from shortest to longest.

A   0.4 m
B   0.54 m
C   0.45 m
D   0.05 m
E   0.054 m

(1) A, D, E, C, B
(2) D, E, A, C, B
(3) B, C, A, D, E
(4) D, E, C, B, A
(5) A, E, C, D, B

18. The illustration shows two boards labeled A and B that are connected by a screw that is 1.875 inches long. How many inches into board A is the screw?

(1) 0.875
(2) 1.0
(3) 1.125
(4) 1.25
(5) 1.5

1.875 in.

0.75 in.

A   B
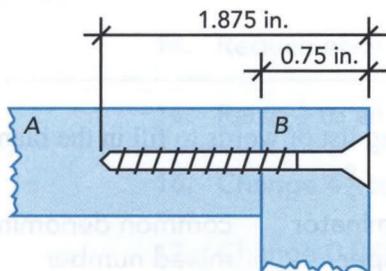
19. Hannah bought 2.5 pounds of cheese that cost $4.99 per pound. Which of the following represents the change in dollars and cents that Hannah should get from $20?

(1) 20(4.99 − 2.5)
(2) 4.99 − 2.5(20)
(3) 2.5 − 20(4.99)
(4) 2.5(4.99) − 20
(5) 20 − 2.5(4.99)

For problems 20 and 21, refer to the information below.

Average Price of a Gallon of Gasoline (summer 2001)	
California	$2.02
Michigan	$1.90
Alabama	$1.56
Georgia	$1.49

20. The gasoline tank in Sandy's car holds 20 gallons. Using the rates listed above, how much would it cost Sandy to fill her tank at the average price of gasoline in Michigan?

(1) $29.80
(2) $31.20
(3) $38.00
(4) $40.40
(5) $48.00

21. According to the list, how much more do 10 gallons of gasoline cost at the average price in California than 10 gallons at the average price in Georgia?

(1) $1.20
(2) $3.40
(3) $4.10
(4) $4.60
(5) $5.30

22. In the orbit of the planet Neptune, its greatest distance from the sun is 2,822,000,000 miles. Represent this number of miles in scientific notation.

(1) 2.822×10^{10}
(2) 2.822×10^{9}
(3) 2.822×10^{8}
(4) 2.822×10^{7}
(5) 2.822×10^{6}

23. According to the 2000 census, the combined population of the 100 largest cities in the U.S. was 5.84×10^{7}. Which of the following equals the population of the 100 largest cities?

(1) 584,000,000
(2) 58,400,000
(3) 5,840,000
(4) 584,000
(5) 58,400

24. Find the mean population of the 100 largest U.S. cities mentioned in the last problem.

(1) 5,840
(2) 58,400
(3) 584,000
(4) 5,840,000
(5) 58,400,000

Answers are on page 134.

Chapter 3

Basic Skills, page 36

1. 6   7   9

2. 5   8   6

3. 6   7   9

4. hundredths

5. tenths

6. thousandths

7. 902.735

8. 0.4   2.4   36.1

9. 1.78   0.03   0.20

10. 13   6   129

11. 0.08

12. 14.007

13. 3

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 × 5.4 = 176.04

19. 33 × 5 = 165

20. $\dfrac{0.56}{7} = 0.08$

21. 4.56 ÷ 12 = 0.38

22. 2.844 ÷ 0.36 = 7.9

23. 15 ÷ 9 = 1.66 ↛ .7

24. 25 ÷ 30 = 0.833 → 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

2. 93.1   19.2 + 73.9 = 93.1 pounds

3. 21.9 $\dfrac{306}{14} = 21.85 \to 21.9$ miles

4. (3) 0.269   0.5 × 0.538 = 0.269 kg

5. (4) $5.04   0.87 × $5.79 = $5.0373 → $5.04

6. (2) .338 $\dfrac{27}{80} = .3375 \to .338$

7. (4) 39   52 × 0.75 = 39 miles

8. (3) 3.5 $\dfrac{\$68.60}{\$19.60} = 3.5$ hours

9. (1) 2.15 $\dfrac{1.2 + 2.55 + 2.7}{3} = \dfrac{6.45}{3} = 2.15$ kg

10. (1) 30 $\dfrac{20}{0.65} = 30 +$ remainder

11. (4) $43.76   15.0883¢ = $0.150883
290 × $0.150883 = $43.756 → $43.76

12. (2) $1.99   100 × $0.150883 = $15.088 → $15.09
100 × $0.130966 = $13.096 → $13.10
$15.09 − $13.10 = $1.99

13. 32.7   964.5 − 931.8 = 32.7 million acres

14. 218.9   2.189 × 100 = 218.9 pounds

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 × $1.90 = $38.00

21. (5) $5.30   10 × $2.02 = $20.20
10 × $1.49 = $14.90
$20.20 − $14.90 = $5.30

22. (2) 2.822 × 10⁹   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

2. denominator

3. improper

4. proper

5. mixed number

6. raising to higher terms

7. canceling

8. reducing

9. common denominators

10. inverse or reciprocal

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

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

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

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

15. $\frac{4}{5} = \frac{24}{30}$

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

17. $0.035 = \frac{35}{1000} = \frac{7}{200}$

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

19. $6 + 6 + 3 = 15$

20. $5\frac{1}{2} = 5\frac{4}{8}$
$6\frac{3}{8} = 6\frac{3}{8}$
$+2\frac{3}{4} = 2\frac{6}{8}$
$\overline{13\frac{13}{8} = 14\frac{5}{8}}$

21. $8 - 3 = 5$

22. $8\frac{1}{3} = 8\frac{4}{12} = 7\frac{4}{12} + \frac{12}{12} = 7\frac{16}{12}$
$-2\frac{3}{4} = 2\frac{9}{12} = \qquad\qquad 2\frac{9}{12}$
$\overline{\qquad\qquad\qquad\qquad\qquad 5\frac{7}{12}}$

23. $\frac{2}{\overset{}{3}} \times \frac{\overset{15}{45}}{1} = \frac{30}{1} = 30$

24. $2 \times 2 = 4$

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

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

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

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.