

Practice Problems

Figure out these problems on a separate sheet of paper.

- What is the equivalent decimal?
 - 6.12×10^{-4}
 - 9.07×10^3
 - 42.71×10^{-10}
- If the length of a room is 26 feet, what will that length measure, in inches, on a blueprint whose scale is $\frac{1}{4}$ inch to the foot?
- What is 8% of 35?
- $7 \times \frac{2}{3} =$
- $3 \div \frac{1}{4} =$
- A pole 16 feet high casts a shadow of 8 feet. A nearby building casts a shadow of 22 feet. How many feet high is the building?
- Property valued at \$32,000 is assessed for $\frac{1}{4}$ of its value. If the property tax levy is \$5 per \$100 of assessed value per year, what is the yearly property tax bill?
- If a part time worker's daily pay was \$50 for Monday, Tuesday and Wednesday, and \$35 for Thursday and Friday, what was the worker's average daily pay for 5 days?
- A piece of cloth measures 4 yds., 3 feet, and 10 inches in length. What is its length in feet?
- As shown on a travel map, one route measures $5 \frac{1}{4}$ inches and the other $4 \frac{1}{2}$ inches. If one inch represents 60 miles, how many miles difference in distance are there between the two routes?
- If the price of a \$48 pair of jeans is reduced by $\frac{1}{4}$, how much sales tax must be paid on the jeans in a state having a 6% sales tax?
- The wages of 3 newspaper carriers totaled \$180 for 2 weeks work. How much will 4 carriers earn if they work for 6 weeks each at the same weekly rate?
- A racetrack measures 9 miles long. If an automobile completes the track in exactly 4 minutes, what is its average rate of speed, in miles per hour?
- The total length of a fence along the front and one side of a rectangular lot is 800 feet. If the front fence is three times as long as the side fence, how many feet long is the side fence?
- A carpenter has a piece of lumber measuring 8 feet $7 \frac{1}{4}$ inches long. How much must the carpenter saw off to be left with a piece 5 feet $10 \frac{5}{16}$ inches long?
- $\frac{5}{32} + \frac{6}{64} =$
- Let M be the set of all integers divisible by both 4 and 12. Which of the following is NOT a divisor of every member of M?
 - 3
 - 4
 - 5
 - 6
- How many distinct prime numbers are factors of 90?
- $\frac{3}{24} + \frac{2}{8} =$
- $6.48 - 3.97 =$

Practice Problems Answers

1. a. .000612
b. 9,070
c. .00004271
2. $6 \frac{1}{2}$
3. 2.8
4. $4 \frac{2}{3}$
5. 12
6. 44
7. 400
8. \$44
9. $15 \frac{5}{6}$
10. 45
11. 2.16
12. \$720
13. 135 mph
14. 200
15. $2' 8 \frac{15}{16}"$
16. $\frac{1}{4}$
17. 5
18. 3
19. $\frac{3}{8}$
20. 2.51

Math Review Problems

1. $87 \div 3 =$
2. $75 \div 5 =$
3. $13 \times 16 =$
4. $15 \times 18 =$
5. $0.847 + 10.07 =$
6. $0.02 + 0.739 =$
7. $789 + 123.67 =$
8. $0.347 - 0.008 =$
9. $1.7 - 0.23 =$
10. $0.43 - 0.18762 =$
11. $6.8 \times 7 =$
12. $0.84 \times 8 =$
13. $6.3 \times 0.04 =$
14. $95.12 \div 4 =$
15. $98.76 \div 12 =$
16. $\frac{3}{8} + \frac{5}{6} =$
17. $7 + \frac{3}{5} =$
18. $\frac{5}{6} - \frac{1}{9} =$
19. $\frac{4}{5} - \frac{3}{10} =$
20. $5 - \frac{2}{6} =$
21. $6 \times \frac{2}{8} =$
22. $\frac{3}{8} \times \frac{5}{7} =$
23. $\frac{6}{7} \div \frac{3}{4} =$
24. $\frac{4}{5} \div 8 =$
25. 40% of 60 =
26. 12% of 50 =
27. $(3.2 \times 10^4)^2 =$
28. $2.35 \times 10^3 =$

Math Review Answers

- | | | | |
|-----|---------|-----|--|
| 1. | 29 | 15. | 8.23 |
| 2. | 15 | 16. | $\frac{29}{24}$ |
| 3. | 208 | 17. | $\frac{38}{5}$ or $7 \frac{3}{5}$ |
| 4. | 270 | 18. | $\frac{13}{18}$ |
| 5. | 10.917 | 19. | $\frac{5}{10}$ |
| 6. | 0.759 | 20. | $\frac{28}{6}$ or $4 \frac{4}{6}$ |
| 7. | 912.67 | 21. | $\frac{12}{8}$ |
| 8. | 0.339 | 22. | $\frac{15}{56}$ |
| 9. | 1.47 | 23. | $\frac{24}{21}$ or $1 \frac{3}{21}$ or $1 \frac{1}{7}$ |
| 10. | 0.24238 | 24. | $\frac{4}{40}$ or $\frac{1}{10}$ |
| 11. | 47.6 | 25. | 24 |
| 12. | 6.72 | 26. | 6 |
| 13. | 0.252 | 27. | 10.24×10^8 |
| 14. | 23.78 | 28. | 2350 |

Math Review Problems #2

1. $136 \div 4 =$
2. $93 \div 3 =$
3. $12 \times 13 =$
4. $17 \times 15 =$
5. $0.367 + 19.31 =$
6. $0.069 + 7.61 =$
7. $658 + 479.13 =$
8. $0.493 - 0.019 =$
9. $1.9 - 0.36 =$
10. $0.73 - 0.24695 =$
11. $4.9 \times 8 =$
12. $0.73 \times 7 =$
13. $7.6 \times 0.06 =$
14. $73.16 \div 4 =$
15. $59.76 \div 12 =$
16. $2/6 + 3/7 =$
17. $8 + 2/3 =$
18. $3/4 - 2/7 =$
19. $4/9 - 3/18 =$
20. $3 - 4/9 =$
21. $9 \times 3/7 =$
22. $2/5 \times 6/8 =$
23. $3/8 \div 1/3 =$
24. $3/10 \div 7 =$
25. $15\% \text{ of } 90 =$
26. $20\% \text{ of } 75 =$
27. $(2.4 \times 10^3)^2 =$
28. $3.47 \times 10^4 =$

Math Review #2 Answers

- | | | | |
|-----|---------|-----|--------------------|
| 1. | 34 | 20. | $23/9$ |
| 2. | 31 | 21. | $27/7$ |
| 3. | 156 | 22. | $12/40$ |
| 4. | 255 | 23. | $9/8$ |
| 5. | 19.677 | 24. | $3/70$ |
| 6. | 7.679 | 25. | 13.5 |
| 7. | 1137.13 | 26. | 15 |
| 8. | 0.474 | 27. | 5.76×10^6 |
| 9. | 1.54 | 28. | 34700 |
| 10. | 0.48305 | | |
| 11. | 39.2 | | |
| 12. | 5.11 | | |
| 13. | .4560 | | |
| 14. | 18.29 | | |
| 15. | 4.98 | | |
| 16. | $32/42$ | | |
| 17. | $26/3$ | | |
| 18. | $13/28$ | | |
| 19. | $5/18$ | | |

SAMPLE MATH TEST

DIRECTIONS: Solve each problem, choose the correct answer and circle the letter. For some questions, the fifth choice for an answer will be "Not given". Whenever none of the first 4 possible answers is correct, choose "Not given" as your answer.

Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left. You will have 25 minutes to work on this test. Work quickly and carefully.

1. $95 + 5 = ?$
 - A. 9
 - B. 13
 - C. 14
 - D. 19
 - E. Not given
2. $18 \times 14 = ?$
 - A. 232
 - B. 242
 - C. 252
 - D. 262
 - E. Not given
3. $0.05 + 0.4 = ?$
 - A. 0.09
 - B. 0.405
 - C. 0.45
 - D. 0.9
 - E. Not given
4. $2.3 \times 8 = ?$
 - A. 0.184
 - B. 16.3
 - C. 1.84
 - D. 1.63
 - E. Not given
5. $7 - 5/8 = ?$
 - A. $5/8$
 - B. $6 \frac{1}{8}$
 - C. $6 \frac{3}{8}$
 - D. $2 \frac{2}{8}$
 - F. Not given
6. $0.6 \times 0.06 = ?$
 - A. 0.36
 - B. 0.66
 - C. 3.6
 - D. 6.6
 - E. Not given
7. $4.1 - .03 = ?$
 - A. 4.07
 - B. 4.4
 - C. 4.13
 - D. 3.2
 - E. Not given
8. $0.45 \div 5 = ?$
 - A. 9
 - B. 0.09
 - C. .9
 - D. 1
 - E. Not given
9. $\frac{1}{4} + \frac{5}{8} = ?$
 - A. 1
 - B. $\frac{6}{12}$
 - C. $\frac{6}{8}$
 - D. $\frac{3}{8}$
 - E. Not given
10. $4.1 - 0.04 = ?$
 - A. 3.5
 - B. 4.06
 - C. 4.14
 - D. 4.6
 - E. Not given
11. $\frac{1}{3} - \frac{1}{9} = ?$
 - A. $\frac{1}{27}$
 - B. $\frac{1}{12}$
 - C. $\frac{1}{6}$
 - D. $\frac{2}{9}$
 - E. Not given
12. If the length of a living room is 23 feet, what will that length measure in inches on a blueprint whose scale is $\frac{1}{2}$ inch to the foot?
 - A. $11 \frac{1}{2}$
 - B. 26
 - C. $10 \frac{3}{4}$
 - D. $2 \frac{2}{3}$
 - E. 24

13. 5% of 24 = ?
 A. 0.1
 B. 0.29
 C. 1.0
 D. 2.9
 E. Not given
14. $3 \times \frac{2}{3} = ?$
 A. $\frac{2}{33}$
 B. $\frac{5}{9}$
 C. $3 \frac{2}{3}$
 D. $\frac{5}{3}$
 E. Not given
15. $4 + \frac{1}{8} = ?$
 A. $\frac{1}{32}$
 B. $\frac{1}{2}$
 C. 2
 D. 32
 E. Not given
16. A flagpole 40 feet high casts a shadow of 10 feet. At the same time, a nearby building casts a 40-foot shadow. How many feet high is the building? (Note: The ground is level and both the building and the flagpole are perpendicular to the ground.)
 A. 160
 B. 90
 C. 80
 D. 70
 E. 60
17. Property valued at \$21,000 is assessed for $\frac{1}{3}$ of its value. If the property tax levy is \$4 per \$100 of assessed value per year, what is the yearly property tax bill?
 A. \$60.00
 B. \$120.00
 C. \$840.00
 D. \$280.00
 E. \$360.00
18. If a part-time worker's daily pay was \$30 for Monday and Tuesday, and \$20 for Wednesday, Thursday, and Friday, what was the worker's average daily pay for 5 days?
 A. \$23.00
 B. \$23.50
 C. \$24.00
 D. \$25.00
 E. \$25.50
19. A piece of cloth measures 3 yards, 2 feet, and 8 inches in length. What is its length in feet?
 A. $11 \frac{2}{3}$
 B. $9 \frac{1}{8}$
 C. $10 \frac{1}{8}$
 D. $9 \frac{2}{8}$
 E. 10
20. As shown on a travel map, one route measures $6 \frac{1}{8}$ inches and the other $6 \frac{1}{2}$ inches. If one inch represents 80 miles, how many miles difference in distance is there between the two routes?
 A. 20
 B. 30
 C. 40
 D. 50
 E. 60
21. If the price of a \$45 pair of jeans is reduced by $\frac{1}{3}$, how much sales tax must be paid on the pair of jeans in a state having a 4% sales tax?
 A. \$.60
 B. \$1.20
 C. \$.90
 D. \$.80
 E. \$1.00
22. Which of the following is equivalent to 5.48×10^{-5} ?
 A. 54,800
 B. 5.0048
 C. 0.0548
 D. 0.00548
 E. 0.0000548

23. The wages of 4 newspaper carriers totaled \$132 for 3 weeks' work. How much will 3 carriers earn if they work for 5 weeks each at the same weekly rate?
- A. \$100.00
 B. \$132.00
 C. \$147.00
 D. \$165.00
 E. \$184.00
24. A racetrack measures 6 miles long. If an automobile completes the track in exactly 5 minutes, what is its average rate of speed in miles per hour?
- A. 30
 B. 40
 C. 45
 D. 60
 E. 72
25. The total length of a fence along the front and one side of a rectangular city lot is 600 feet. If the front fence is twice as long as the side fence, how many feet long is the side fence?
- A. 600
 B. 500
 C. 250
 D. 200
 E. Not given
26. A carpenter has a piece of lumber measuring 10 feet $6\frac{3}{4}$ inches long. How much must the carpenter saw off to be left with a piece 7 feet $11\frac{5}{16}$ inches long? (Note: Assume the saw cut has no width)
- A. 2 feet $6\frac{1}{2}$ inches
 B. 2 feet $7\frac{1}{8}$ inches
 C. 2 feet $7\frac{7}{16}$ inches
 D. 3 feet $5\frac{7}{16}$ inches
 E. Not given
27. Which one of the following statements about absolute values is FALSE for some real numbers a and b ?
- A. $a \leq |a|$
 B. $|-a| = |a|$
 C. $|a^2| = a^2$
 D. $|ab| = |a| |b|$
 E. $|a - b| = |a + b|$
28. $(2.1 \times 10^5)^2 =$
- A. 4.41×10^{25}
 B. 4.41×10^{10}
 C. 4.41×10^9
 D. 4.41×10^7
 E. 4.41×10^5
29. Let S be the set of all integers divisible by both 6 and 15. Which of the following is NOT a divisor of every member of S ?
- A. 2
 B. 5
 C. 9
 D. 10
 E. 30
30. How many distinct prime numbers are factors of 70?
- A. 10
 B. 7
 C. 5
 D. 3
 E. 2

Sample Math Test Answers

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|-------|-------|
| 1. D | 16. A |
| 2. C | 17. D |
| 3. C | 18. C |
| 4. E | 19. A |
| 5. C | 20. B |
| 6. E | 21. B |
| 7. A | 22. E |
| 8. B | 23. D |
| 9. E | 24. E |
| 10. B | 25. D |
| 11. D | 26. C |
| 12. A | 27. E |
| 13. E | 28. B |
| 14. E | 29. C |
| 15. D | 30. D |



