PERT Study Guide Arithmetic

1. Divide: (-6.8) ÷ (-0.02) C
2. -34
3. 300
4. 340
5. 13.6

 2. Add: -16 + -3 C

1. 13
2. 48
3. -19
4. -13
5. Simplify: 3[5 + 2(8 – 3)] D
6. 55
7. 20
8. 35
9. 45
10. Add the rational numbers: (-2/3) + (-1/9) + 2 D
11. 3/9
12. 11/3
13. 4/3
14. 11/9
15. Simplify by performing the order of operations: -(2 – 8)² ÷ (-6)(2) B
16. -12
17. 3
18. 24
19. 8
20. Subtract: 6 – 8 – 2 – 10 D
21. 14
22. 12
23. 4
24. -14

7. Subtract: 23 – (-17) A

1. 40
2. -40
3. 10
4. 6
5. Subtract the mixed numbers: $10\frac{2}{5}$ - $4\frac{3}{4}$ A
6. $5\frac{13}{20}$
7. $12\frac{23}{30}$
8. 6$ \frac{3}{4}$
9. $ 4\frac{4}{5}$
10. Find the least common multiple of 10, 15, and 8 C
11. 5
12. 140
13. 120
14. 10
15. Simplify: 6 – 2 • 2 + 2⁵ C
16. 18
17. 12
18. 34
19. 40

 11. Simplify to lowest terms: $\frac{20}{24}$ B

1. $\frac{2}{3}$
2. $\frac{5}{6}$
3. $\frac{4}{5}$
4. $\frac{6}{5}$
5. Evaluate the expression for the given substitutions: 5 + 6d when d = $\frac{2}{3}$ C
6. -6
7. 14
8. 9
9. 5
10. Translate the phrase into the algebraic expression. “Four times the sum of x and 12.” B
11. x + 4(12)
12. 4(x + 12)
13. 4x + 12
14. $ \frac{4}{x+12}$
15. Simplify: $\left(\frac{1}{4}+ \frac{2}{3}\right)²$ D
16. 41/72
17. 1/9
18. 11/144
19. 121/144
20. Solve the proportion: $\frac{4}{15}$ = $\frac{9}{n}$ C
21. $\frac{2}{\begin{array}{c}270\\\end{array}}$
22. $\frac{4}{\begin{array}{c}135\\\end{array}}$
23. $\frac{135}{\begin{array}{c}4\\\end{array}}$
24. $\frac{130}{\begin{array}{c}7\\\end{array}}$
25. On a sunny day, a 6-foot man casts a 3.2 foot shadow on the ground. At the same time, a building casts an 80 foot shadow. How tall is the building?
26. 100 feet B
27. 150 feet
28. 175 feet
29. 205 feet
30. What is 30% of 180? B
31. 56
32. 54
33. 35
34. 48
35. The legs of a right triangle are 6 units, respectively. Find the length of the hypotenuse of the right triangle.

B

1. 94 units
2. 9 units
3. 12 units
4. 100 units
5. Write an algebraic equation to represent the English sentence. Then solve the equation.

“The quotient of a number and 12 is 7.” Let x represent unknown number.

1. No solution D
2. $\frac{12}{x}=7$; x = $\frac{12}{7}$
3. $12x=7;$ x = $\frac{7}{12}$
4. $\frac{x}{12}=7;$ x = 84
5. Which of the following is equivalent to (8 – 5) ÷ 2³ D
6. 27/8
7. 19/8
8. 1/125
9. 3/8
10. What percentage is the same as 0.002? D
11. 0.002%
12. 2%
13. 20%
14. 0.2%

 22. Which of the following is NOT between -1 and 1? B

1. 1/10
2. -3/2
3. 1/4
4. -1/3

 23. 5(-8 – 2) + 3 = ? A

1. -47
2. 53
3. 83
4. -53

24. Simplify: 8 + 5z – w – 8z – w D

1. 8 + 13z – 2w
2. 8 + 13z
3. 8 – 3z
4. 48zw
5. 8 – 3z – 2w

25. Simplify: $\frac{14-30}{2(-4)}$ A

1. 2
2. -2
3. 11/2
4. -11/2

26. Solve for x: 3(x + 1) = -6 D

1. 8
2. -3
3. 1
4. -2

27. Add the terms: 2a + 3b + 5a – 7b D

1. 3ab
2. 7a – 10b
3. 7a + 4b
4. 7a – 4b

28. The difference of twice a number and six is four times the number. Find an equation to solve for the number.

1. 2x – 6 = 4x B
2. 2x + 6 = 4x
3. 2x – 6 = x + 4
4. 2x – 6 = 4

29. If John has $50 more than Mary and you choose to represent John’s amount of money as x, how should you represent Mary’s amount of money in terms of x?

1. x + 50 C
2. 50 – x
3. x – 50
4. -50 - x

30. At one time, Steve Young of the San Francisco 49ers was ranked as the NFL’s best passer. For one particular game he completed 23 of 30 passes. What percent of passes did he complete? Round to the nearest tenth of a percent.

1. 76.0% B
2. 76.7%
3. 77.0%
4. 73.3%

31. Solve: 3(x – 5) <= x – 8 (<= means “less than or equal to”) (≤)

 A

1. x ≤ 3.5
2. x ≤ -1
3. x ≤ 1
4. x ≤ -3.5

32. Simplify: 8² - 2³ ÷ (-7 + 5) D

1. 87
2. 60
3. 76
4. -28

33. Simplify by using the order of operations: 300 ÷ (7 – 2)² - 2² B

1. 0
2. 8
3. -4
4. 32

34. Simplify: 10(5y + 2) – 6(y -1) D

1. 34y – 23
2. 44y – 22
3. -21y + 32
4. 44y + 26

35. Simplify: -8 + 8 ÷ (-2) ÷ (-6) C

1. -10/3
2. 2/3
3. -22/3
4. 11/3

36. Solve the equation: 7 + 3 = 2(p – 3) A

1. p = 8
2. p = 4
3. p = 0
4. p = -2

37. Solve the equation: 2.2y – 8.3 = 6.2y + 12.1 A

1. y = -5.1
2. y = 4.1
3. y = 6.3
4. y = -5.2