

ALGEBRA 1 READINESS ASSESSMENT

Circle the letter that corresponds to the correct answer

Arithmetic

- Which of the following is a number between 5.6 and 5.7?
 - 5.8
 - 5.5
 - 5.64
 - 5.0

- $1.6 \times 0.2 =$
 - 0.32
 - 3.2
 - 3.20
 - 320

- $98.453 - 3.21 =$
 - 98.132
 - 981.32
 - 95.243
 - 66.353

- $20 + .423 + 1.33 =$
 - 76.5
 - 21.753
 - 58.5
 - 76.5

- $79.2/0.5 =$
 - 1.584
 - 15.84
 - 158.4
 - 1584.0

- $-2(4 - 7) =$
 - $-8 + 14$
 - $-8 - 14$
 - $8 - 14$
 - $-8 - 14$

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

7. $14 - 5 + (-6) - 23 =$

- a. -20
- b. 147
- c. 31
- d. -129

8. $\frac{125}{-25} =$

- a. 5
- b. 100
- c. -5
- d. -100

9. $-44 \times (-2) =$

- a. -88
- b. 88
- c. -22
- d. 22

10. $30 - 3 \div 3 =$

- a. 9
- b. 29
- c. 1/3
- d. -29

11. $\frac{15}{7} \cdot \frac{4}{5} \cdot \frac{7}{2} =$

- a. 6
- b. 4
- c. 1/6
- d. 7/42

12. $3 \frac{1}{2} =$

- a. 4/2
- b. 7/2
- c. 7/4
- d. 3/2

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

13. $-2\frac{2}{3} \div 4\frac{1}{10} =$

a. $8\frac{3}{13}$

b. $-8\frac{3}{13}$

c. $10\frac{14}{15}$

d. $-10\frac{14}{15}$

14. $\frac{1}{2} \div \frac{5}{4}$

a. $\frac{5}{2}$

b. $\frac{5}{8}$

c. 2

d. $\frac{2}{5}$

15. $\frac{9}{5} \div 2$

a. $\frac{9}{10}$

b. $\frac{18}{5}$

c. $\frac{11}{5}$

d. 4

16. Write 65% as a decimal

a. 65

b. 0.65

c. 6.5

d. 0.065

17. Write 445% as a decimal

a. 4.45

b. 44.5

c. 445

d. 0.445

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

18. Write 0.452 as a percent
- a. 0.452% b. 452%
- c. 4.52% d. 45.2%

19. Write 80% as a fraction
- a. $\frac{4}{5}$ b. $\frac{8}{100}$
- c. $\frac{8}{1}$ d. $\frac{1}{8}$

20. Write $\frac{3}{8}$ as a percent.
- a. 38% b. 37.5%
- c. 375% d. 380%

Number Theory

21. List all positive factors of 16.
22. Write the prime factorization of 40.
23. Find the Greatest Common Factor of 24 and 28
- a. 24 b. 28
- c. 4 d. 20

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

24. Find the Greatest Common Factor of $30y^3$ and $20y^2$
- a. $20y^3$ b. $5y$
c. $5y^2$ d. $10y^2$
25. What is the Least Common Multiple of 14 and 6?
- a. 84 b. 42
c. 21 d. 6
26. Write the prime factorization of $18xy$.
27. Write the prime factorization of $78a^3$.
28. $(8)^2 - (3)^2 =$
- a. 16 b. 10
c. 55 d. 5^2
29. 4^3 has the same value as
- a. $4 \times 4 \times 4$ b. 4×3
c. $4 + 3$ d. 1
30. $5^8 \times 5^{-2} =$
- a. 5^{10} b. 5^6
c. 6^5 d. 5^{-16}

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

Algebraic Expressions

31. $-(-2 - n) =$

- a. $-2 - n$ b. $2 - n$
c. $2 + n$ d. $-2 + n$

32. $(3 - 7k) \cdot (-2) =$

- a. $-6 - 14k$ b. $-6 + 14k$
c. $-5 - 9k$ d. $-5 + 9k$

33. $7p - 10p =$

- a. $3p$ b. $-3p$
c. $17p$ d. $-17p$

34. $-4p - (1 - 6p)$

- a. $2p - 1$ b. $-10p - 1$
c. $-11p$ d. $-2p$

35. Evaluate $8(x - y)$ for $x = 5$ and $y = 2$

36. Evaluate $b(a + b)$ for $a = 9$ and $b = 4$

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

Equations

37. If $\frac{m}{16} = -2$; $m =$

- a. 14
- b. -48
- c. -32
- d. $-\frac{1}{8}$

38. If $-10 = x - 21$; $x =$

- a. 11
- b. -31
- c. -11
- d. 31

39. If $\frac{5}{n} = 30$; $n =$

- a. 6
- b. $\frac{1}{6}$
- c. 150
- d. -150

40. $3^n = 1$ if $n =$

- a. 0
- b. 1
- c. -1
- d. there is no value of n that will make $3^n = 1$

41. $3^n = 0$ if $n =$

- a. 0
- b. 1
- c. -1
- d. there is no value of n that will make $3^n = 0$

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

42. If $3p - 2 = -29$, $p =$

a. 9 b. -9

c. $\frac{-31}{3}$ d. $\frac{31}{3}$

43. If $|x| = 5$; $x =$

a. -5 b. 5

c. -5 or 5 d. neither -5 or 5

44. If $\sqrt{x} = 9$; $x =$

a. 3 b. 81

c. 9 d. 27

45. The product of a number n and 7 is 56. Which of the following equations represents this statement?

a. $n + 7 = 56$ b. $\frac{n}{7} = 56$

c. $7n = 56$ d. $n = 7 \times 56$

46. How old am I if 2 times my age is 28?

a. 56 b. 30

c. 14 d. 26

Inequalities

47. If $n - 2 \geq -20$, then

a. $n \geq -22$ b. $n \leq -22$

c. $n \geq -18$ d. $n \leq -18$

ALGEBRA 1 READINESS ASSESSMENT (Cont'd.)

48. If $-4r \geq 16$, then

- a. $r \geq -4$ b. $r \geq 4$
c. $r \leq -4$ d. $r \leq 4$

49. If $x - 2 \geq 5$; then

- a. x can be 7 or more b. $x = 8$
c. $x = 7$ d. $x = 5$

Properties

50. $x + y = y + x$

- a. True b. False

51. $(x + y) + z = x + (y + z)$

- a. True b. False

52. $x(y + z) = xy + xz$

- a. True b. False

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ALGEBRA 1 READINESS ASSESSMENT ANSWER KEY

- | | |
|------------------------------------------------------------------------------------|--------|
| 1. C | 36. 61 |
| 2. A | 37. C |
| 3. C | 38. A |
| 4. B | 39. B |
| 5. C | 40. A |
| 6. A | 41. D |
| 7. A | 42. B |
| 8. C | 43. C |
| 9. B | 44. B |
| 10. B | 45. C |
| 11. A | 46. C |
| 12. B | 47. C |
| 13. D | 48. C |
| 14. D | 49. A |
| 15. A | 50. A |
| 16. B | 51. A |
| 17. A | 52. A |
| 18. D | |
| 19. A | |
| 20. B | |
| 21. 1, 2, 4, 8, 16 | |
| 22. $2 \times 2 \times 2 \times 5$ or $2^3 \times 5$ | |
| 23. C | |
| 24. D | |
| 25. B | |
| 26. $2 \cdot 3 \cdot 3 \cdot x \cdot y$ or $2 \cdot 3^2 \cdot x \cdot y$ | |
| 27. $2 \cdot 3 \cdot 13 \cdot a \cdot a \cdot a$ or $2 \cdot 3 \cdot 13 \cdot a^3$ | |
| 28. C | |
| 29. A | |
| 30. B | |
| 31. C | |
| 32. B | |
| 33. B | |
| 34. A | |
| 35. 24 | |