

The **Algebra 1 Placement & Skills Achievement Tests MathBox** contains four multiple-choice tests with questions covering the following skills:

- **Real Number Properties**
- **Expressions and Equations**
- **Inequalities**
- **Real Numbers**
- **Polynomials**
- **Factoring Polynomials**
- **Linear Equations**
- **Systems of Linear Equations**
- **Dividing Polynomials**
- **Rational Expressions**
- **Radical Expressions**
- **Quadratics**
- **Relations and Functions**

The test is available in four equivalent versions so that it can be used multiple times with the same students. Each test contains 50 questions.

The questions used in these tests have been selected from the *William K. Bradford Algebra 1 TestBank*.

Algebra I Placement & Skills Achievement Test

1. Every number on the number line is a
- A whole number
 - B rational number
 - C irrational number
 - D real number
 - E all of these
2. Write an open expression for: The product of M and 9
- A $9M$
 - B $\frac{9}{M}$
 - C $\frac{M}{9}$
 - D $M + 9$
 - E none of these
3. Find the volume of a rectangular solid if $l = 24m$, $w = 17m$, and $h = 10m$ ($V = lwh$)
- A $8040m^3$
 - B $4080m^3$
 - C $-3m^3$
 - D $51m^3$
 - E none of these
4. $-35 - (-21) =$
- A -14
 - B -56
 - C -54
 - D +14
 - E +19
5. $-7 \cdot (-6) =$
- A -13
 - B +42
 - C -49
 - D -42
 - E +13
6. $-\frac{3}{8} + \frac{1}{5} =$
- A $-\frac{7}{40}$
 - B $-\frac{2}{3}$
 - C $-\frac{4}{13}$
 - D $+\frac{23}{40}$
 - E $-\frac{23}{40}$
7. $\frac{1}{2} + \left(-\frac{1}{8}\right) =$
- A 0
 - B $+\frac{1}{5}$
 - C $+\frac{3}{8}$
 - D $+\frac{5}{8}$
 - E $-\frac{5}{8}$
8. Evaluate $a^3 - b$ for $a = 2$ and $b = 4$
- A 22
 - B 2
 - C 14
 - D -2
 - E 4
9. Which equation would you use to solve this problem: Karen saved \$8.00 on a coat that was reduced 20%. What was the original cost of the coat?
- A $8x = 20\%$
 - B $0.2(8) = x$
 - C $0.2x = 8$
 - D $\frac{x}{8} = 20\%$
 - E $\frac{0.2}{x} = 8$

Algebra I Placement & Skills Achievement Test

1. Name the rational number
- A $\sqrt{3}$
 - B $\sqrt{4}$
 - C $\sqrt{2}$
 - D π
 - E all of these
2. Write an open expression for: 15 decreased by $4t$
- A $4t - 15$
 - B $4t(15)$
 - C $15 + 4t$
 - D $15 - 4t$
 - E none of these
3. Find the volume of a rectangular solid if $l = 9\text{km}$, $w = 1\text{km}$, and $h = 9\text{ km}$ ($V = lwh$)
- A 1km^3
 - B 19km^3
 - C 721km^3
 - D 81 km^3
 - E none of these
4. $+21 - (+35) =$
- A $+56$
 - B -14
 - C -54
 - D $+66$
 - E $+14$
5. $-9 \cdot (+7) =$
- A $+63$
 - B -63
 - C -2
 - D $+72$
 - E -72
6. $-3 \cdot [6 + (+8)] =$
- A $-3 \cdot (-6) + (8)$
 - B $-3 \cdot (-6) + (-3) \cdot (8)$
 - C $-3 \cdot (-6) + (-3)$
 - D $-18 + (-3) \cdot (8)$
 - E $-6 + (-3) \cdot (8)$
7. $-\frac{3}{4} \cdot (-\frac{9}{5}) =$
- A $-1\frac{1}{3}$
 - B $+1\frac{7}{20}$
 - C $-\frac{2}{3}$
 - D $+1\frac{1}{3}$
 - E $-1\frac{7}{20}$
8. Simplify $7m^2 - 5m + 2 + 6m^2 + 9m + 4$
- A $13m^2 + 4m + 6$
 - B $22m^2 - 5m + 6$
 - C $13m^2 - m + 11$
 - D $24m^6$
 - E $17m^3 + 6$
9. Which equation would you use to solve this problem: At Linda's Cafe, Tom received \$31.50 in tips on customer's bills of \$210.00. What percent did his customers tip?
- A $31.50x = 210$
 - B $210x = 31.50$
 - C $\frac{x}{210} = 31.50$
 - D $\frac{x}{31.50} = 210$
 - E none of these

Algebra I Placement & Skills Achievement Test

1. π is a(n)
- A integer
 - B rational number
 - C irrational number
 - D whole number
 - E none of these
2. Write an open sentence for: Maria's age "a" decreased by 2 is 12
- A $12 - a = 2$
 - B $a - 2 = 12$
 - C $a - 12 = 2$
 - D $2 - a = 12$
 - E none of these
3. Every number that has a decimal expansion is a
- A whole number
 - B rational number
 - C irrational number
 - D real number
 - E all of these
4. $-7 - (+5) =$
- A $+7 + (+5)$
 - B $-7 + (-5)$
 - C $+7 + (-5)$
 - D $-7 + (+5)$
 - E $+7 - (-5)$
5. $+6 \cdot (-5) =$
- A +1
 - B -30
 - C +35
 - D -35
 - E +11
6. $-\frac{4}{7} \div \left(-\frac{7}{2}\right) =$
- A +2
 - B $+6\frac{7}{8}$
 - C $-\frac{3}{5}$
 - D $+\frac{8}{49}$
 - E -2
7. $-7 \cdot (+2) \cdot (0) \cdot (-4) =$
- A -18
 - B +28
 - C -28
 - D +18
 - E 0
8. Evaluate $2x^3 + y^2$ for $x = 3$ and $y = 2$
- A 22
 - B 58
 - C 168
 - D 108
 - E 54
9. Which equation would you use to solve the problem: 40 more than Joe's bowling score is 190. Find his score.
- A $40 - s = 190$
 - B $s + 40 = 190$
 - C $s - 190 = 40$
 - D $s - 190 = 40$
 - E $s = 190 + 40$
10. Solve: $3n + 5 = 2n + 1$
- A $n = 1$
 - B $n = 4$
 - C $n = -1$
 - D $n = -4$
 - E none of these

Algebra I Placement & Skills Achievement Test

1. $.4 =$

- A $\frac{1}{4}$
 B $\frac{4}{5}$
 C $\frac{2}{5}$
 D $\frac{1}{25}$
 E none of these

2. Write an open sentence for: The sum of a number N and 25 is 39

- A $N - 25 = 39$
 B $N + 39 = 25$
 C $25 - N = 39$
 D $N + 25 = 39$
 E none of these

3. Solve $3r + 5 = 11$ using $\{0, 1, 2, 3, 4\}$

- A $\{0, 1\}$
 B $\{3, 4\}$
 C $\{0\}$
 D $\{2\}$
 E none of these

4. $+5 - (-4) =$

- A $+5 + (+4)$
 B $-5 + (-4)$
 C $+5 + (-4)$
 D $-5 + (+4)$
 E $-5 - (+4)$

5. $+6 \cdot (-2) \cdot (-4) =$

- A -16
 B +48
 C +14
 D -24
 E +16

6. $-\frac{9}{16} \cdot \left(-\frac{3}{4}\right) =$

- A $-\frac{12}{16}$
 B $+\frac{11}{20}$
 C $+\frac{3}{4}$
 D $-\frac{11}{20}$
 E $+\frac{27}{64}$

7. $\frac{7}{10} \div \left(-\frac{3}{7}\right) =$

- A $-\frac{3}{10}$
 B $-1\frac{19}{30}$
 C $+1\frac{1}{13}$
 D $-\frac{30}{49}$
 E $+\frac{30}{49}$

8. Simplify $-8n - 4n^2 + 8n + 3n^2$

- A $-n^3$
 B $-7n^2 - 16n$
 C $-12n^2 + 11n$
 D $-7n^2 + 16n$
 E $-n^2$

9. Solve: $-2(3x - 4) = -4x$

- A $x = 3$
 B $x = 4$
 C $x = \frac{4}{5}$
 D $x = -4$
 E none of these