

Independent Study Algebra 1 Worksheets

#1 Assignment Worth 5 Lessons

Solve each equation.

1) $|7m| = 56$

2) $|-5 + m| = 9$

3) $|3 + v| = 13$

4) $\left|\frac{p}{10}\right| = 1$

5) $\left|\frac{x}{2}\right| = 2$

6) $|x + 9| = 12$

7) $|n - 4| = 1$

8) $|-6a| = 6$

9) $\left|\frac{b}{9}\right| = 1$

10) $|k - 5| = 13$

#2 Assignment Worth 5 Lessons

Solve each inequality.

1) $|a + 7| > 16$

2) $\left| \frac{n}{4} \right| < 5$

3) $|2n| < 12$

4) $|b - 10| < 10$

5) $|n - 1| \geq 2$

6) $|4x| < 32$

7) $|-6x| > 12$

8) $\left| \frac{p}{5} \right| \leq 3$

9) $|b + 8| < 9$

10) $|2p| \leq 16$

#3 Assignment Worth 5 Lessons

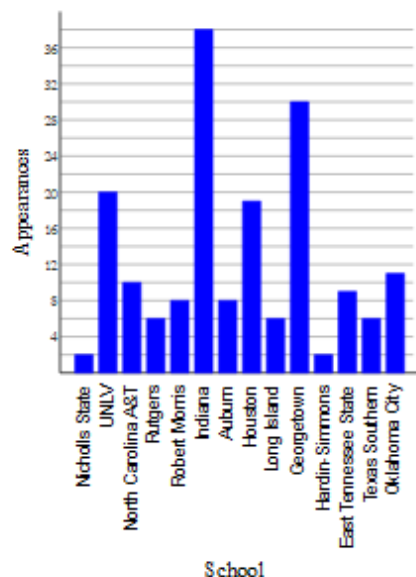
Find the mean for each data set.

- 1) Injuries Due to Distracted Driving per Month

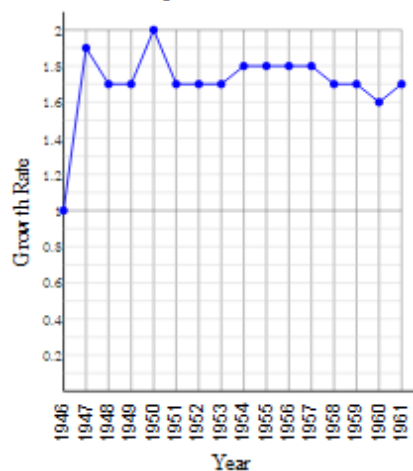
Stem	Leaf
3	3
4	2 5 8
5	
6	5 5 9
7	1 4 5 6
8	0 5 7
9	1 4 6

Key: 65 = 6,500

- 2) Basketball Tournament



- 3) US Population Growth



- 4) Boiling Point

Substance	°C	Substance	°C
Plutonium	3,232	Gold	2,856
Sulphuric Acid	337	Aluminum	2,519
Iodine	184.3	Methanol	64.7
Nitric Acid	83	Water	100
Zinc	907	Cobalt	2,870
Radium	1,140	Silicon	2,357
Sea Water	100.7	Carbon	4,827
Titanium	3,287	Glycerol	290

#4 Assignment Worth 5 Lessons

Simplify each expression.

1) $9 + 3n + n - 7$

2) $n + 2 - 8n + 1$

3) $2x - 8x$

4) $-p + 10p$

5) $-4x + 3x$

6) $m - 3 + m + 9$

7) $n + 6 + 7n$

8) $2a + 10a$

9) $7n - 4 + 3n + 7$

10) $5a - 7a$

11) $4x - 9x$

12) $5 - 7n + n + 5$

13) $n - 10 - 3$

14) $r + 4r$

15) $x - 10x$

16) $-6n + 9n$

17) $1 - 7m + 7 - 5m$

18) $b - 8 - 9$

19) $-4p + p$

20) $4n - 3n$

#5 Assignment Worth 5 Lessons

Simplify each expression.

1) $-2(3 - 4n)$

2) $4(1 + 7n)$

3) $-7(9 - 7x)$

4) $9(8 + 8x)$

5) $9(-3 + n)$

6) $2(6 - 9a)$

7) $-5(3k - 10)$

8) $3(3p - 6)$

9) $-8(n - 6)$

10) $-5(6n + 8)$

11) $10(k - 9)$

12) $-7(a + 3)$

13) $-8(-8v + 9)$

14) $3(n - 9)$

15) $7(4x - 3)$

16) $-(6 + 7n)$

17) $3(1 + 7x)$

18) $-2(n + 2)$

19) $8(3n + 7)$

20) $8(-5 + 3v)$

#6 Assignment Worth 5 Lessons

Simplify each expression.

1) $-8 + 8(7 - 8p)$

2) $3(2n - 7) + 4$

3) $-p - 10(p + 7)$

4) $-a - 5(5 + a)$

5) $9(-3x - 6) - 10x$

6) $10x - 10(x + 6)$

7) $2 - 2(x + 6)$

8) $6b - 6(1 + 10b)$

9) $-(r + 7) - 6$

10) $-b + 8(10b - 6)$

11) $-9(1 + 4v) - 10$

12) $-9 + 3(4x + 6)$

13) $2(5 + 5a) - 10$

14) $-(-3 + 2b) - 6b$

15) $7 - 3(2 + 2x)$

16) $2(9x - 10) + 10x$

17) $-p - 2(10p + 5)$

18) $3(8n + 1) - 8n$

19) $10(n + 4) + 9n$

20) $5(-4x - 5) - 7x$

#7 Assignment Worth 5 Lessons

Find the distance between each pair of points.

1) $(6, 0), (5, 5)$

2) $(1, -4), (3, -3)$

3) $(8, 3), (-2, 1)$

4) $(2, -7), (3, -6)$

5) $(4, 5), (1, 6)$

6) $(-2, 2), (6, 0)$

7) $(4, 4), (5, 3)$

8) $(-2, 5), (-8, 6)$

9) $(0, -6), (2, -8)$

10) $(2, -8), (-1, -1)$

#8 Assignment Worth 5 Lessons

Simplify each expression.

1) $-2(b - 9)$

2) $4(-10x - 10)$

3) $9(5 + n)$

4) $4(9x + 3)$

5) $-2(a + 2)$

6) $-8(x + 6)$

7) $-(8r - 10)$

8) $5(a + 9)$

9) $-6(1 + x)$

10) $4(k - 7)$

11) $-7(8 - 7k)$

12) $-2(m - 2)$

13) $-2(7n - 7)$

14) $10(-5 - 5r)$

15) $4(10 + 6n)$

16) $3(10 + 5p)$

17) $7(4k + 3)$

18) $-2(5r + 8)$

19) $3(9 + 5x)$

20) $4(1 - 3x)$

#9 Assignment Worth 5 Lessons

Simplify. Write each answer in scientific notation.

1) $\frac{2.19 \times 10^{-3}}{2 \times 10^2}$

2) $\frac{7.71 \times 10^6}{6.3 \times 10^{-3}}$

3) $\frac{3.05 \times 10^{-5}}{4 \times 10^{-1}}$

4) $\frac{6 \times 10^3}{8.5 \times 10^4}$

5) $\frac{8 \times 10^2}{6.5 \times 10^{-5}}$

6) $\frac{8 \times 10^5}{2 \times 10^4}$

7) $\frac{9.63 \times 10^{-3}}{8 \times 10^6}$

8) $\frac{6.4 \times 10^0}{2.2 \times 10^{-2}}$

9) $\frac{8 \times 10^{-2}}{4.58 \times 10^{-5}}$

10) $\frac{7 \times 10^{-1}}{3 \times 10^{-1}}$

#10 Assignment Worth 5 Lessons

Simplify. Write each answer in scientific notation.

1) $(8.9 \times 10^{-6})(7.1 \times 10^1)$

2) $(3.36 \times 10^6)(6 \times 10^2)$

3) $(2.6 \times 10^3)(6 \times 10^{-3})$

4) $(9.6 \times 10^1)(2.3 \times 10^0)$

5) $(8.11 \times 10^{-4})(5.2 \times 10^1)$

6) $(5 \times 10^{-4})(9.93 \times 10^4)$

7) $(8.57 \times 10^2)(4 \times 10^1)$

8) $(9 \times 10^5)(9 \times 10^3)$

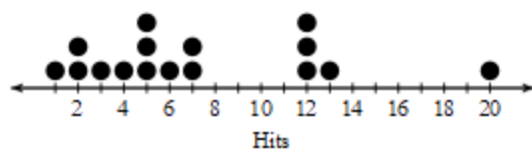
9) $(6.8 \times 10^3)(9 \times 10^{-6})$

10) $(5.92 \times 10^2)(6.9 \times 10^{-6})$

#11 Assignment Worth 5 Lessons

Find the mean for each data set.

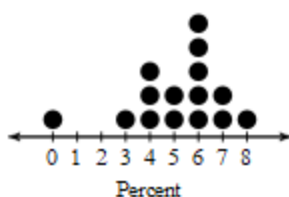
- 1) Hits in a Round of Hacky Sack



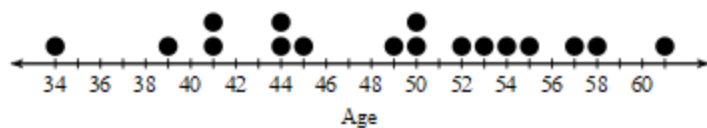
- 2) Length of Book Titles



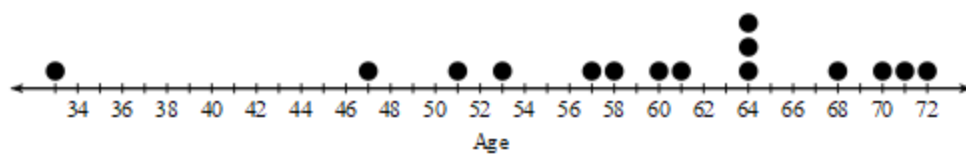
- 3) Sales Tax by State



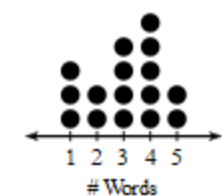
- 4) US Senators When Assuming Office



- 5) Nobel Laureates



- 6) Length of Book Titles



12 Assignment Worth 5 Lessons

Solve each equation.

1) $|-9m| = 81$

2) $|4 + r| = 13$

3) $|8n| = 64$

4) $|x + 3| = 7$

5) $|x - 2| = 1$

6) $|4 + n| = 1$

7) $|-3b| = 12$

8) $\left|\frac{a}{6}\right| = 2$

9) $\left|\frac{p}{4}\right| = 5$

10) $|3p| = 15$

13 Assignment Worth 5 Lessons

Solve each equation for the indicated variable.

1) $u = b - a + k$, for a

2) $am = np$, for a

3) $c - a = d - r$, for a

4) $xm = p - n$, for x

5) $m + x = n + p$, for x

6) $xk = w + v$, for x

7) $x - m = p + n$, for x

8) $\frac{k}{x} = v + w$, for x

14 Assignment Worth 5 Lessons

Solve each equation.

1) $4(7b - 2) = -120$

2) $-104 = 4x - 8(2x + 1)$

3) $-5(-8p - 3) = 135$

4) $-3n - 8(-5n + 2) = -164$

5) $-6(-7m + 7) = 84$

6) $105 = -7(-4n - 7)$

7) $5(-7 - 3x) = -110$

8) $-104 = -5(-8 - 5n) + 6$

9) $-108 = -3(8 + 4a)$

10) $103 = 6(a + 8) + 7$

15 Assignment Worth 5 Lessons

Solve each proportion.

1) $\frac{7}{4} = \frac{v}{7}$

2) $\frac{n}{6} = \frac{5}{8}$

3) $\frac{4}{2} = \frac{n}{6}$

4) $\frac{k}{5} = \frac{6}{2}$

5) $\frac{n}{3} = \frac{3}{9}$

6) $\frac{8m}{3} = \frac{5}{8}$

7) $\frac{4}{3} = \frac{n}{8}$

8) $\frac{9a}{3} = \frac{10}{5}$

9) $\frac{n}{5} = \frac{10}{3}$

10) $\frac{4}{x} = \frac{9}{3}$