

Mental Math

Grade 8

Equation Solving

Mental Math #1 – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

- | | | | |
|------------------|-------------------------|--------------------|-------------------------|
| 1) $x + 3 = 9$ | $x = \underline{\quad}$ | 11) $a - 7 = -6$ | $a = \underline{\quad}$ |
| 2) $x - 2 = 10$ | $x = \underline{\quad}$ | 12) $a + 9 = 14$ | $a = \underline{\quad}$ |
| 3) $y - 7 = -8$ | $y = \underline{\quad}$ | 13) $b - 11 = 5$ | $b = \underline{\quad}$ |
| 4) $y + 10 = -5$ | $y = \underline{\quad}$ | 14) $b + 3 = -10$ | $b = \underline{\quad}$ |
| 5) $w + 6 = -3$ | $w = \underline{\quad}$ | 15) $c + 14 = -2$ | $c = \underline{\quad}$ |
| 6) $w - 12 = 15$ | $w = \underline{\quad}$ | 16) $c - 15 = 30$ | $c = \underline{\quad}$ |
| 7) $x + 15 = 27$ | $x = \underline{\quad}$ | 17) $d - 12 = 16$ | $d = \underline{\quad}$ |
| 8) $x - 2 = -35$ | $x = \underline{\quad}$ | 18) $d + 30 = 90$ | $d = \underline{\quad}$ |
| 9) $y + 1 = -7$ | $y = \underline{\quad}$ | 19) $e + 17 = 20$ | $e = \underline{\quad}$ |
| 10) $y - 4 = 16$ | $y = \underline{\quad}$ | 20) $e - 22 = -10$ | $e = \underline{\quad}$ |

Mental Math #2 – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 8 = 11$ $x = \underline{\quad}$

2) $x - 9 = -2$ $x = \underline{\quad}$

3) $y - 6 = 0$ $y = \underline{\quad}$

4) $y + 1 = -5$ $y = \underline{\quad}$

5) $w + 4 = -3$ $w = \underline{\quad}$

6) $w - 9 = -5$ $w = \underline{\quad}$

7) $x + 7 = 1$ $x = \underline{\quad}$

8) $x - 2 = -1$ $x = \underline{\quad}$

9) $y + 4 = -1$ $y = \underline{\quad}$

10) $y - 12 = 16$ $y = \underline{\quad}$

11) $a - 5 = 3$ $a = \underline{\quad}$

12) $a + 6 = 13$ $a = \underline{\quad}$

13) $b - 7 = -16$ $b = \underline{\quad}$

14) $b + 4 = 1$ $b = \underline{\quad}$

15) $c + 2 = -2$ $c = \underline{\quad}$

16) $c - 6 = -4$ $c = \underline{\quad}$

17) $d - 2 = 16$ $d = \underline{\quad}$

18) $d + 9 = 7$ $d = \underline{\quad}$

19) $e + 17 = 3$ $e = \underline{\quad}$

20) $e - 10 = -11$ $e = \underline{\quad}$

Mental Math #3 – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 5 = -6$ $x = \underline{\quad}$

2) $x - 3 = 9$ $x = \underline{\quad}$

3) $y - 8 = -2$ $y = \underline{\quad}$

4) $y + 7 = -5$ $y = \underline{\quad}$

5) $w + 13 = -3$ $w = \underline{\quad}$

6) $w - 11 = 7$ $w = \underline{\quad}$

7) $x + 19 = 9$ $x = \underline{\quad}$

8) $x - 12 = -1$ $x = \underline{\quad}$

9) $y + 40 = 10$ $y = \underline{\quad}$

10) $y - 18 = 19$ $y = \underline{\quad}$

11) $a - 13 = 8$ $a = \underline{\quad}$

12) $a + 20 = 5$ $a = \underline{\quad}$

13) $b - 15 = -16$ $b = \underline{\quad}$

14) $b + 17 = 10$ $b = \underline{\quad}$

15) $c + 9 = -2$ $c = \underline{\quad}$

16) $c - 12 = -40$ $c = \underline{\quad}$

17) $d - 18 = 13$ $d = \underline{\quad}$

18) $d + 14 = 16$ $d = \underline{\quad}$

19) $e + 7 = 32$ $e = \underline{\quad}$

20) $e - 4 = -19$ $e = \underline{\quad}$

Mental Math #4 – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 23 = -12$ $x = \underline{\quad}$

2) $x - 31 = 90$ $x = \underline{\quad}$

3) $y - 27 = -5$ $y = \underline{\quad}$

4) $y + 16 = -2$ $y = \underline{\quad}$

5) $w + 42 = 10$ $w = \underline{\quad}$

6) $w - 19 = 8$ $w = \underline{\quad}$

7) $x + 34 = 9$ $x = \underline{\quad}$

8) $x - 15 = 28$ $x = \underline{\quad}$

9) $y + 36 = -10$ $y = \underline{\quad}$

10) $y - 37 = 19$ $y = \underline{\quad}$

11) $a - 48 = 8$ $a = \underline{\quad}$

12) $a + 67 = 7$ $a = \underline{\quad}$

13) $b - 11 = -19$ $b = \underline{\quad}$

14) $b + 23 = 63$ $b = \underline{\quad}$

15) $c + 12 = -3$ $c = \underline{\quad}$

16) $c - 90 = 40$ $c = \underline{\quad}$

17) $d - 51 = 19$ $d = \underline{\quad}$

18) $d + 17 = 5$ $d = \underline{\quad}$

19) $e + 36 = -50$ $e = \underline{\quad}$

20) $e - 9 = -29$ $e = \underline{\quad}$

Mental Math #1A – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

- | | | | |
|-----------------------|-------------------------|--------------------------|-------------------------|
| 1) $3x = 9$ | $x = \underline{\quad}$ | 11) $\frac{a}{7} = 11$ | $a = \underline{\quad}$ |
| 2) $\frac{x}{4} = 9$ | $x = \underline{\quad}$ | 12) $4a = 48$ | $a = \underline{\quad}$ |
| 3) $-2y = -20$ | $y = \underline{\quad}$ | 13) $7b = -21$ | $b = \underline{\quad}$ |
| 4) $\frac{y}{5} = -5$ | $y = \underline{\quad}$ | 14) $\frac{b}{9} = -7$ | $b = \underline{\quad}$ |
| 5) $\frac{n}{3} = 12$ | $n = \underline{\quad}$ | 15) $5c = 125$ | $c = \underline{\quad}$ |
| 6) $6w = 48$ | $w = \underline{\quad}$ | 16) $\frac{c}{10} = 7.5$ | $c = \underline{\quad}$ |
| 7) $-4x = -32$ | $x = \underline{\quad}$ | 17) $-9d = -81$ | $d = \underline{\quad}$ |
| 8) $\frac{x}{2} = 35$ | $x = \underline{\quad}$ | 18) $\frac{d}{12} = 12$ | $d = \underline{\quad}$ |
| 9) $\frac{y}{6} = 7$ | $y = \underline{\quad}$ | 19) $-8e = 32$ | $e = \underline{\quad}$ |
| 10) $8y = 72$ | $y = \underline{\quad}$ | 20) $11e = 121$ | $e = \underline{\quad}$ |

Mental Math #2A – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $\frac{x}{3} = 8$

$x = \underline{\quad}$

11) $4a = 32$

$a = \underline{\quad}$

2) $-4y = -20$

$y = \underline{\quad}$

12) $7b = -28$

$b = \underline{\quad}$

3) $\frac{y}{4} = -4$

$y = \underline{\quad}$

13) $\frac{b}{5} = -7$

$b = \underline{\quad}$

4) $\frac{n}{6} = 9$

$n = \underline{\quad}$

14) $-8c = 64$

$c = \underline{\quad}$

5) $5w = 60$

$w = \underline{\quad}$

15) $\frac{c}{12} = 3$

$c = \underline{\quad}$

6) $-9x = -63$

$x = \underline{\quad}$

16) $-6d = -54$

$d = \underline{\quad}$

7) $\frac{x}{2} = 16$

$x = \underline{\quad}$

17) $\frac{d}{10} = 6.4$

$d = \underline{\quad}$

8) $\frac{y}{8} = 7$

$y = \underline{\quad}$

18) $-3e = 27$

$e = \underline{\quad}$

9) $3y = -36$

$y = \underline{\quad}$

19) $11e = 88$

$e = \underline{\quad}$

10) $2x = 70$

$x = \underline{\quad}$

20) $\frac{a}{7} = 8$

$a = \underline{\quad}$

Mental Math #3A – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $3x = 60$

$x = \underline{\quad}$

11) $\frac{a}{7} = 11.1$

$a = \underline{\quad}$

2) $\frac{x}{4} = 90$

$x = \underline{\quad}$

12) $4a = 360$

$a = \underline{\quad}$

3) $-10y = -260$

$y = \underline{\quad}$

13) $7b = -280$

$b = \underline{\quad}$

4) $\frac{y}{5} = -110$

$y = \underline{\quad}$

14) $\frac{b}{9} = -70$

$b = \underline{\quad}$

5) $\frac{n}{3} = 80$

$n = \underline{\quad}$

15) $5c = 225$

$c = \underline{\quad}$

6) $8w = 480$

$w = \underline{\quad}$

16) $\frac{c}{10} = 68.4$

$c = \underline{\quad}$

7) $-4x = -360$

$x = \underline{\quad}$

17) $-9d = -810$

$d = \underline{\quad}$

8) $\frac{x}{2} = 160$

$x = \underline{\quad}$

18) $\frac{d}{12} = 40$

$d = \underline{\quad}$

9) $\frac{y}{6} = 70$

$y = \underline{\quad}$

19) $-8e = 240$

$e = \underline{\quad}$

10) $6y = -420$

$y = \underline{\quad}$

20) $6e = 618$

$e = \underline{\quad}$

Mental Math #4A – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $\frac{x}{3} = 40$ $x = \underline{\quad}$

11) $8a = 400$ $a = \underline{\quad}$

2) $-5y = -200$ $y = \underline{\quad}$

12) $7b = -280$ $b = \underline{\quad}$

3) $\frac{y}{4} = -40$ $y = \underline{\quad}$

13) $\frac{b}{5} = -60$ $b = \underline{\quad}$

4) $5w = 60$ $w = \underline{\quad}$

14) $-8c = -160$ $c = \underline{\quad}$

5) $\frac{n}{6} = 90$ $n = \underline{\quad}$

15) $\frac{c}{12} = 20$ $c = \underline{\quad}$

6) $-7x = -630$ $x = \underline{\quad}$

16) $-6d = 420$ $d = \underline{\quad}$

7) $\frac{x}{8} = 70$ $x = \underline{\quad}$

17) $\frac{d}{10} = 570$ $d = \underline{\quad}$

8) $\frac{y}{2} = 55$ $y = \underline{\quad}$

18) $-3e = 150$ $e = \underline{\quad}$

9) $3y = -300$ $y = \underline{\quad}$

19) $2e = 888$ $e = \underline{\quad}$

10) $2x = 90$ $x = \underline{\quad}$

20) $\frac{a}{7} = 70$ $a = \underline{\quad}$

Mental Math #1B – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 3 = -6$ $x = \underline{\quad}$

2) $6a = 48$ $a = \underline{\quad}$

3) $y - 4 = -2$ $y = \underline{\quad}$

4) $\frac{c}{10} = 8.2$ $c = \underline{\quad}$

5) $w + 3 = -3$ $w = \underline{\quad}$

6) $\frac{y}{6} = 11$ $y = \underline{\quad}$

7) $x + 6 = 9$ $x = \underline{\quad}$

8) $\frac{b}{9} = -5$ $b = \underline{\quad}$

9) $y + 30 = 10$ $y = \underline{\quad}$

10) $\frac{d}{12} = 11$ $d = \underline{\quad}$

11) $a - 10 = 8$ $a = \underline{\quad}$

12) $\frac{y}{5} = -5$ $y = \underline{\quad}$

13) $b - 12 = -16$ $b = \underline{\quad}$

14) $-8x = -32$ $x = \underline{\quad}$

15) $c + 5 = -2$ $c = \underline{\quad}$

16) $8e = -64$ $e = \underline{\quad}$

17) $d - 19 = 13$ $d = \underline{\quad}$

18) $2w = 48$ $w = \underline{\quad}$

19) $e + 3 = 32$ $e = \underline{\quad}$

20) $-4x = -16$ $x = \underline{\quad}$

Mental Math #2B – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 7 = -2$ $x = \underline{\quad}$

2) $4a = 64$ $a = \underline{\quad}$

3) $y - 9 = -2$ $y = \underline{\quad}$

4) $\frac{c}{-2} = 8$ $c = \underline{\quad}$

5) $w + 11 = -2$ $w = \underline{\quad}$

6) $\frac{y}{7} = 9$ $y = \underline{\quad}$

7) $x + 13 = 5$ $x = \underline{\quad}$

8) $\frac{b}{-6} = -4$ $b = \underline{\quad}$

9) $y + 5 = -10$ $y = \underline{\quad}$

10) $\frac{d}{2} = 52$ $d = \underline{\quad}$

11) $a - 5 = 12$ $a = \underline{\quad}$

12) $\frac{y}{3} = -6$ $y = \underline{\quad}$

13) $b - 6 = -16$ $b = \underline{\quad}$

14) $-5x = -65$ $x = \underline{\quad}$

15) $c + 1 = -27$ $c = \underline{\quad}$

16) $3e = -30$ $e = \underline{\quad}$

17) $d - 8 = 13$ $d = \underline{\quad}$

18) $2w = 264$ $w = \underline{\quad}$

19) $e + 9 = 32$ $e = \underline{\quad}$

20) $-7x = -49$ $x = \underline{\quad}$

Mental Math #3B – Equation Solving

Predicted Score: /20

Actual Score: /20

Prediction Score: /5

1) $x + 11 = -5$ $x = \underline{\quad}$

2) $9a = -81$ $a = \underline{\quad}$

3) $y - 6 = -18$ $y = \underline{\quad}$

4) $\frac{c}{7} = 11$ $c = \underline{\quad}$

5) $w + 15 = -8$ $w = \underline{\quad}$

6) $\frac{y}{2} = 405$ $y = \underline{\quad}$

7) $x + 18 = 15$ $x = \underline{\quad}$

8) $\frac{b}{-7} = 8$ $b = \underline{\quad}$

9) $y - 23 = -10$ $y = \underline{\quad}$

10) $\frac{d}{9} = 12$ $d = \underline{\quad}$

11) $a - 14 = 9$ $a = \underline{\quad}$

12) $\frac{y}{-5} = -3$ $y = \underline{\quad}$

13) $b - 40 = -10$ $b = \underline{\quad}$

14) $4x = -48$ $x = \underline{\quad}$

15) $c + 9 = -23$ $c = \underline{\quad}$

16) $-8e = 48$ $e = \underline{\quad}$

17) $d - 6 = 33$ $d = \underline{\quad}$

18) $5w = 125$ $w = \underline{\quad}$

19) $e + 14 = 32$ $e = \underline{\quad}$

20) $-3x = -39$ $x = \underline{\quad}$