SOLVING EQUATIONS

A DEFINITIONS

A.1 MATH ESCAPE ROOM LEVEL 1

MCQ 1: For this Math escape room, the code is:

$$\bigcirc + 5 = 9$$

Which code do you use to enter?

- ☐ $\bigcirc = 2$
- ☐ $\bigcirc = 4$
- ☐ $\bigcirc = 5$
- ☐ $\bigcirc = 9$

MCQ 2: For this Math escape room, the code is:

$$\triangle + 10 = 1 + 2 \times 6$$

Which code do you use to enter?

- ☐ $\triangle = 3$
- ☐ $\triangle = 5$
- ☐ $\triangle = 8$
- ☐ $\triangle = 10$

MCQ 3: For this Math escape room, the code is:

$$\square + 5 = 2 \times 4 + 1$$

Which code do you use to enter?

- ☐ $\square = 6$
- ☐ $\square = 8$
- ☐ $\square = 5$
- ☐ $\square = 4$

MCQ 4: For this Math escape room, the code is:

$$\bigcirc - 4 = 3 \times 2 - 1$$

Which code do you use to enter?

- ☐ $\bigcirc = 7$
- ☐ $\bigcirc = 6$
- ☐ $\bigcirc = 5$
- ☐ $\bigcirc = 9$

A.2 MATH ESCAPE ROOM LEVEL 2

MCQ 5: For this Math escape room, the code is:

$$2 \times \bigcirc - 2 = \bigcirc + 10$$

Which code do you use to enter?

- ☐ $\bigcirc = 8$
- ☐ $\bigcirc = 10$
- ☐ $\bigcirc = 12$
- ☐ $\bigcirc = 14$

MCQ 6: For this Math escape room, the code is:

$$3x + 7 = x + 19$$

Which code do you use to enter?

- ☐ $x = 2$
- ☐ $x = 4$
- ☐ $x = 6$
- ☐ $x = 8$

MCQ 7: For this Math escape room, the code is:

$$2x - 2 = x + 10$$

Which code do you use to enter?

- ☐ $x = 6$
- ☐ $x = 8$
- ☐ $x = 10$
- ☐ $x = 12$

MCQ 8: For this Math escape room, the code is:

$$x \times (x - 2) = 24$$

Which code do you use to enter?

- ☐ $x = 6$
- ☐ $x = 7$
- ☐ $x = 8$
- ☐ $x = 9$

A.3 MATH ESCAPE ROOM LEVEL 3

MCQ 9: For this Math escape room, the code is:

$$x^2 - 4 = 0$$

Which code do you use to enter?

- ☐ $x = 2$
- ☐ $x = 3$
- ☐ $x = 4$
- ☐ $x = 5$

MCQ 10: For this Math escape room, the code is:

$$x^2 - 2x + 1 = 0$$

Which code do you use to enter?

- ☐ $x = 0$
- ☐ $x = 1$
- ☐ $x = 2$
- ☐ $x = 3$

MCQ 11: For this Math escape room, the code is:

$$\frac{2x+1}{x-1} = 3$$

Which code do you use to enter?

- ☐ $x = 2$
- ☐ $x = 3$
- ☐ $x = 4$
- ☐ $x = 5$

B SOLVING BY TRIAL AND ERROR

B.1 FINDING A SOLUTION LEVEL 1

Ex 12: Consider the equation $2x + 3 = 11$.
Use the trial-and-error method to find a solution (try $x = 2, 3, \ldots$).

$$x = \square$$

Ex 13: Consider the equation $3x - 5 = 10$.
Use the trial-and-error method to find a solution (try $x = 4, 5, \ldots$).

$$x = \square$$

Ex 14: Consider the equation $x(x - 1) = 6$.
Use the trial-and-error method to find a solution (try $x = 2, 3, \ldots$).

$$x = \square$$

Ex 15: Consider the equation $2x - 3 = 5x - 9$.
Use the trial-and-error method to find a solution (try $x = 0, 1, \ldots$).

$$x = \square$$

B.2 FINDING A SOLUTION LEVEL 2

Ex 16: Consider the equation $x^2 - 2x + 1 = 0$.
Use the trial-and-error method to find a solution (try $x = 0, 1, \ldots$).

$$x = \square$$

Ex 17: Consider the equation $x^2 - 9 = 0$.
Use the trial-and-error method to find a solution (try $x = 2, 3, \ldots$).

$$x = \square$$

Ex 18: Consider the equation $\frac{x+2}{x-2} = 2$.
Use the trial-and-error method to find a solution (try $x = 6, 3, 4$).

$$x = \square$$