

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

1. Solve $2x^2 + 7x - 4 = 0$ by factoring. Show your factors and your work.
- _____

2. What are the two x-intercepts of the graph of $y = x^2 - 2x - 8$? Hint: use factors and show your work before circling your answer.

A -2 and 8 B 2 and -8 C 4 and 2 D 4 and -2

3. Simplify $\sqrt{128}$ as far as you can. Do NOT write a decimal as your answer.
- _____

4. What is the solution of $x^2 - 6x = 11$? Show your work before circling your answer.

A $3 \pm 2\sqrt{5}$ B $-3 \pm \sqrt{5}$ C $-3 \pm 2\sqrt{5}$ D $3 \pm 5\sqrt{5}$

5. The graph of a quadratic function passes through the points (0, -4) and (-2, 0). What is a zero of the function? Hint: REALLY think about what the phrase 'a zero' means here.
- _____

6. Solve $x^2 - 5x = 84$ by factoring. Show your work before writing your answers (there should be two) below.
- _____

7. Solve $(x + 7)^2 = 49$. Show your work before writing your answers below (there are two)

8. Use the Quadratic Formula to solve $x^2 + 14x + 44 = 0$. Which of the following are the solutions to the nearest hundredth? Hint: you will need to use your calculator to find your final answers. Circle the correct choice.

A -9.24 and -4.76

B -9.24 and 4.76

C 9.23 and 4.76

D 16.64 and -2.64

9. Find the value of c that makes $x^2 + 20x + c$ a perfect square trinomial. Circle the correct answer.

A 10

B 400

C 100

D 4

10. What is the discriminant of the equation $2x^2 + 3x + 4 = 0$? Show your work before selecting your answer.

A 41

B -23

C -24

D 23

BONUS: There has been so much sad and depressing news since this pandemic hit and it has completely disrupted all of our lives. What is one thing that has made you happy during the past month and a half since we have been out of school?
