BitWith Bite

MATHEMATICS WORKSHEET

Quadratic Equations

Chapter: Algebra I · Level ★★☆ · Time: 30 min

SCORE ___ / 20

Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

✓ Solve quadratics by factoring. ✓ Solve by taking square roots. ✓ Understand the two roots.

✓ Recognise when there is no real solution.

Section A · Concept Check • BEGINNER 4 × 1 = 4

1 Solve $x^2 + 8x + 15 = 0$:

◯ A. x = −3 or −5 ◯ B. x = 3 or 5

◯ C. x = −15 or −1 ◯ D. x = 8 or 15

2 Solve $x^2 - 36 = 0$:

◯ A. x = 6 or −6 ◯ B. x = 36 ◯ C. x = 6

◯ D. x = −36

3 Solve $x^2 = 100$:

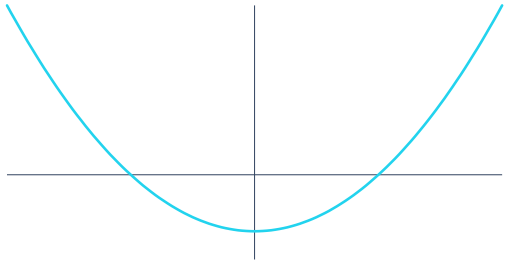
◯ A. x = 10 or −10 ◯ B. x = 10 ◯ C. x = 50

◯ D. x = −100

4 Solve $x^2 - 9x + 20 = 0$:

◯ A. x = 4 or 5 ◯ B. x = −4 or −5 ◯ C. x = 9 or 20

◯ D. x = 2 or 10



$y = x^2 - 4$ crosses the x-axis at its roots $x = \pm 2$

Section B · Problem Solving • INTERMEDIATE 2 + 3×3 = 11

5 $x^2 - 36 = 0$ gives x = _____.

6 $x^2 = 100$ gives x = _____.

7 Solve $x^2 + 8x + 15 = 0$ by factoring.

8 Solve $x^2 - 36 = 0$.

9 Solve $x^2 = 100$.

Section C · Challenge • CHALLENGE 5

10 Solve $x^2 - 9x + 20 = 0$ by factoring.

Reflection — the most useful thing I learned: ----------

A ___/4 B ___/11 C ___/5 **Total ___/20**

Teacher's Signature

Parent's Signature

✂ ANSWER KEY — FOLD OR CUT BEFORE HANDING OUT

1-A 2-A 3-A 4-A | 5 ±6 6 ±10 7 = x = -3 or x = -5 8 = x = 6 or x = -6 9 = x = 10 or x = -10 | 10 = x = 4 or x = 5