

Name _____

Date _____

VERTEXMATH • BUILD YOUR OWN • MPM2D GRADE 10

Quadratic Relations: your summary

1 Fill in every blank from memory. No notes.**2** Check it against the Unit Summary in a different colour.**3** Tick ✓ or X on each card. Every X is a topic to review.vertexmath.ca
Worksheet, answers &
this cheat sheet

Where to start?

Write the tool for each case.

 $x: 0, 1, 2; y: 4, 1, 0$

$$y = 4(x + 2)(x - 6)$$

Fence, price rises

1 Finite differences**1** $x: 0, 1, 2, 3, 4; y: 1, 6, 9, 10, 9$. Linear, quadratic or neither? Find a .**2** Second differences are all 6. What is a , and which way does it open?**2** Parts of a parabola**3** Vertex $(-2, 7)$, opens down. State the axis, and the maximum or minimum value.**3** Factored form**4** $y = -3(x - 2)(x + 6)$: zeros, direction of opening, axis and vertex.**4** Finding a ; best fit**5** Zeros -4 and 6 , through $(2, 48)$. Find the equation.**5** Expanding**6** Expand $(4x + 5)^2$.**7** Write $y = -3(x - 7)(x + 2)$ in standard form.**6** Maximum and minimum**8** A rectangle has a perimeter of 64 m. Find the largest possible area.**7** Zeros in context**9** $h = -5t(t - 6)$, h in metres, t in seconds. When does the ball land, and how high does it go?

My traps

 Your three most likely mistakes, and how you will catch each one.**1** _____ **2** _____ **3** _____

Answers • Answers to the numbered prompts. Cover this strip until you are done.

1 First 5, 3, 1, -1; second -2; quadratic, $a = -1$, opens down
2 $a = 3$; up
3 $x = -2$; maximum value 7
4 2, -6; down; $x = -2$; $(-2, 48)$
5 $y = -2(x + 4)(x - 6)$
6 $16x^2 + 40x + 25$
7 $y = -3x^2 + 15x + 42$
8 $A = w(32 - w)$; $w = 16$ m, 256 m²
9 $t = 6$ s; $h(3) = 45$ m