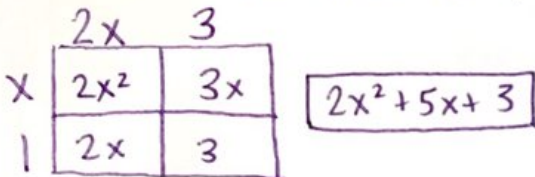


Applications

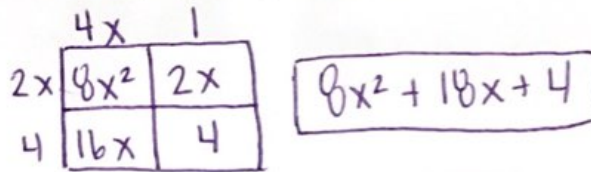
Key!

29. Find the area of each rectangle by drawing an area model.

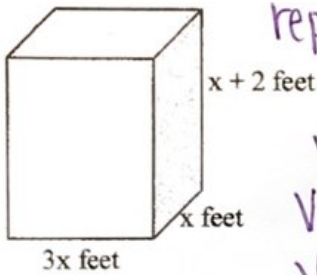
a. length $(2x + 3)$ width $(x + 1)$



b. length $(4x + 1)$ width $(2x + 4)$



30. This diagram shows the dimensions of a cardboard box.



repeat problem! Which expression represents the volume, in cubic feet, of the box?

$$V = lwh$$

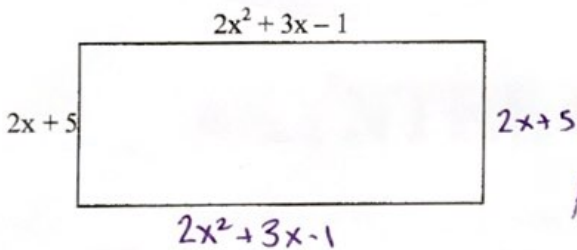
$$V = 3x \cdot x \cdot x + 2$$

$$V = 3x^2(x + 2)$$

$$V = 3x^3 + 6x^2$$

- A. $3x^3 + 2$ cubic feet
- B. $5x^3 + 2$ cubic feet
- C. $3x^3 + 6x^2$ cubic feet
- D. $5x^3 + 6x^2$ cubic feet

31. Find the perimeter and area of the rectangle.



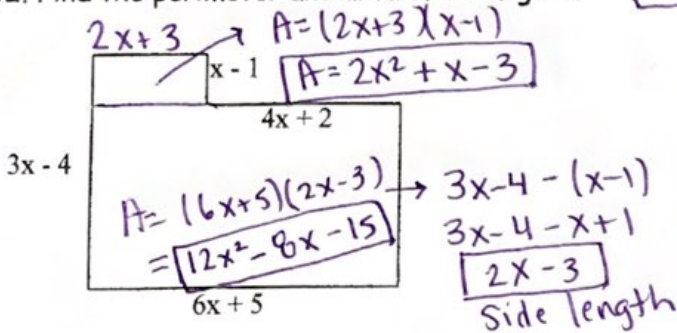
$$P = 4x^2 + 10x + 8$$

$$A = (2x + 5)(2x^2 + 3x - 1)$$

$$4x^3 + 6x^2 - 2x + 10x^2 + 15x - 5$$

$$A = 4x^3 + 16x^2 + 13x - 5$$

32. Find the perimeter and area of the figure.



$$A = (2x + 3)(x - 1)$$

$$A = 2x^2 + x - 3$$

$$A = (6x + 5)(2x - 3)$$

$$= 12x^2 - 8x - 15$$

$$3x - 4 - (x - 1)$$

$$3x - 4 - x + 1$$

$$2x - 3$$

Side length

$$P = 18x + 2$$

$$A = 14x^2 - 7x - 10$$