Bell Ringer - Solve the quadratic. Leave in simplified radical form.

$$2x^2 - 30 = 168$$

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$$2x^{2} - 30 = 168$$
 $+30 + 30$
 $2x^{3} = 198$
 $2x^{3} = 198$
 $2x^{4} = 99$
 $2x^{5} = 499$
 $2x^{5} = 499$
 $2x^{5} = 499$
 $2x^{5} = 43711$

1. $5x^2 - 10x = 120$

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$$5x^{2} - 10x = 120$$

$$5x^{2} - 10x - 120 = 0$$

$$5(x^{2} - 2x - 24) = 0$$

$$5(x^{2} - 2x - 24) = 0$$

$$5(x - 6)(x + 4) = 0$$

$$X = 6 \text{ and } -4$$

2.
$$2x^3 - 4x^2 - 30x = 0$$

$$2. 2x^3 - 4x^2 - 30x = 0$$

$$2 \times (x^2 - 2 \times - 15) = 0$$

$$2x(x-5)(x+3)=0$$

$$x = 0, 5, 3$$

$$3. -3x^2 - 7x + 84 = 0$$

3.
$$-3x^{2} - 7x + 84 = 0$$

$$7 \pm \sqrt{1057}$$

$$-6$$

$$7 \pm 32.5$$

$$-6$$

$$-6.58, 4.25$$

4.
$$x^3 - 2x^2 - 5x + 10 = 0$$

$$4.(x^{3} - 2x^{2})(-5x + 10) = 0$$

$$x^{3}(x-2) - 5(x-2) = 0$$

$$(x-2)(x^{3}-5) = 0$$

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