Consider the following four LP formulations. Using a graphical approach, determine

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| a. Which formulation has more than one optimal solution |
| b. Which formulation is unbounded |
| c. Which formulation has no feasible solution |
| d. Which formulation is correct as is |

Formulation 1

Maximize 10X₁ + 10X₂

Subject to 2X₁ ≤ 10

2X₁ + 4X₂ ≤ 16

4X₂ ≤ 8

X₁ = 6

Formulation 2

Maximize X₁ + 2X₂

Subject to X₁ ≤ 1

2X₂ ≤ 2

X₁ + 2X₂ ≤ 2

Formulation 3

Maximize 3X₁ + 2X₂

Subject to X₁ + X₂ ≥ 5

X₁ ≥ 2

2X₂ ≥ 8

Formulation 4

Maximize 3X₁ + 3X₂

Subject to 4X₁ + 6X₂ ≤ 48

4X₁ + 2X₂ ≤ 12

3X₂ ≥ 3

2X₁ ≥ 2