

Section 8.7: Linear programming

<p>1)</p> <p>Maximize: $z = 3x + 2y$</p> <p>Subject to:</p> $x + y \leq 9$ $3x + y \leq 15$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 31 section 8.6)</p>	<p>2)</p> <p>Maximize: $z = x + 12y$</p> <p>Subject to:</p> $x + y \leq 5$ $3x + y \leq 9$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 32 section 8.6)</p>
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<p>3)</p> <p>Maximize: $z = 5x + 6y$</p> <p>Subject to:</p> $x + 2y < 8$ $2x + y \leq 7$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 33 section 8.6)</p>	<p>4)</p> <p>Maximize: $z = 9x + 20y$</p> <p>Subject to:</p> $4x + 2y \leq 12$ $3x + y \leq 7$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 34 section 8.6)</p>
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<p>5)</p> <p>Minimize: $z = 30x + 25y$</p> <p>Subject to:</p> $x + y \geq 4$ $3x + y \geq 6$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 35 section 8.6)</p>	<p>6)</p> <p>Minimize: $z = 10x + 40y$</p> <p>Subject to:</p> $x + y \geq 5$ $3x + y \geq 9$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 36 section 8.6)</p>
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<p>7)</p> <p>Minimize: $z = x + 3y$</p> <p>Subject to:</p> $2x + 5y \leq 20$ $2x + y \geq 12$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 37 section 8.6)</p>	<p>8)</p> <p>Minimize: $z = 50x + 15y$</p> <p>Subject to:</p> $3x - 2y \leq 5$ $3x - y \leq 7$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 38 section 8.6)</p>
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<p>9)</p> <p>Minimize: $z = 5x + 4y$</p> <p>Subject to:</p> $x - 2y \leq 2$ $2x + y \geq 14$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 39 section 8.6)</p>	<p>10)</p> <p>Minimize: $z = 3x + 7y$</p> <p>Subject to:</p> $4x - 2y \leq 2$ $3x + y \geq 9$ $x \geq 0, y \geq 0$ <p>(Constraints same as problem 40 section 8.6)</p>
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