

The wise man decides not to take back his offer. The Queen convinces the King to make a new offer to the wise man because she knows that they cannot meet the original request.

Graph the new offer.

The Queen suggests a smaller chessboard with 16 squares.

How much rice will the wise man receive under this new plan?

The Queen's new plan suggests giving the wise man one grain of rice for the first square of the chessboard, 3 grains of rice for the second square, 9 grains of rice for the third square, and continues to triple.

What is the rule for any square?

The original plan was a 64 square chessboard where the wise man requested 1 grain for the first square, 2 grains for the second square, 4 grains for the third square, and so on doubling each day.

Compare the wise man's original plan with the queen's new plan.

The King does not like to be told what to do so he comes up with his own new offer for the wise man.

Graph the new offer.

The King thought that an even smaller chessboard would be better. The king's plan involves using a board with 12 squares.

How much rice will the wise man receive under this new plan?

The King's new plan starts with one grain of rice on the first square and quadruple the number of grains from one square to the next.

What is the rule for any square?

The wise man's original plan started with 1 grain on the first square and doubled the amount on each square for 64 squares. The queen's plan started with 1 grain on the first square and tripled the amount from one square to the next for 16 squares. The king's plan started with 1 grain on the first square and quadrupled the amount on each square for 12 squares.

Compare the all three plans.

The Prince came up with a plan for his father to offer for the wise man.

Graph the new offer.

The Prince also suggests staying with a traditional chessboard with 64 squares.

How much rice will the wise man receive under this new plan?

The Prince's plan suggests giving the wise man 20 grains of rice for the first square of the chessboard, 25 grains of rice for the second square, 30 grains of rice for the 3rd square, and continues to increase the number of grains by 5 for each square.

What is the rule for any square?

The wise man's plan started with 1 grain on the first square and doubled the amount on each square for 64 squares, the queen's plan started with 1 grain on the first square and tripled the amount from on each square for 16 squares, the king's plan started with 1 grain on the first square and quadrupled the amount on for 12 squares.

Compare these plans with the Prince's plan.

The Royal Mathematician comes up with his own offer for the wise man.

Graph the new offer.

The Royal Mathematician also suggests a chessboard with 16 squares.

How much rice will the wise man receive under this new plan?

The Royal Mathematician's new plan suggests giving the wise man 500 grains of rice for the first square of the chessboard, 1000 grains of rice for the second square, 2000 grains of rice for the 3rd square, and continues to double.

What is the rule for any square?

The wise man's plan started with 1 grain on the first square and doubled the amount for 64 squares, the queen's plan started with 1 grain on the first square and tripled the amount for 16 squares, the king's plan started with 1 grain on the first square and quadrupled the amount for 12 squares, the prince's plan started with 20 grains and increased by 5 for each square.

Compare these plans with the plan by the Royal Mathematician.