

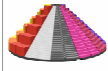


Activity D.5
On Belay

Game Objective: The first team to get all of its Mountain climbers to the top wins.

Recommended Number of Players: 2 - 3 teams

Ages: 9 & up



Setup:

- 1) Put staircases in counterclockwise sequence 1x → 12x.
- 2) You will need three dice.
- 3) During set up, if desired teams may place multiples on the Mountain to help them calculate the difference in elevation between the highest and lowest climber on their team before they finalize their turn. Elevations will be measured in feet.
- 4) Allow each team to pick a uniquely colored foam card. Each team places one of their climbers (uniquely colored tokens) blank side up on the tabletop in front of each staircase, 3x → 12x.

Play:

- 1) The term "on belay" means "to secure a person by attaching to one end of a rope". The topmost climber on a team can be no more than 20 feet above the lowest climber on the team, because the climbers are tied to a 20 ft long rope. If a team violates this rule, all of the climbers on the team must return to the bottom to start again.
- 2) The first team rolls three dice. After the dice have been rolled, all teams make a move (discussed below) based on that roll.
- 3) One of each team's climbers can ascend (move up) one or more whole step(s) on their own trail. They cannot move up partial steps; the move

For example, if a 2, 5, and a 6 were rolled, the possible elevation gains and moves are:

Dice Used and Operations	Possible Moves (only one per turn)
Single die 2	1 step on 2x
Single die 5	1 step on 5x
Single die 6	3 steps on 2x 2 steps on 3x 1 step on 6x
Add 2 + 5 = 7	1 step on 7x
Add 2 + 6 = 8	4 steps on 2x 2 steps on 4x

must be exactly equal to the elevation gain as calculated.

Hint: More than one team may have a climber on the same step at a time. Rather than putting climbers in the notches, have them land on the top of the step.

- 4) To calculate possible elevation gains (moves) a player may decide to use any **one** die or any operation (+, -, x, /) using any **two** dice. Each team then moves one climber for their play.
- 5) After all teams have made a move, teams should evaluate their opponent's move to see if they violate the on belay rule (the difference in elevation between the topmost climber and the bottom most climber can not be greater than 20). If so, the opponent's climbers must return to base camp and start over.
- 6) The dice are handed to the next team to roll. Play continues with each team getting to roll the dice in turn but **all** teams moving a climber on each roll.
- 7) The team that gets all of its climbers to the top first wins.

Add $2 + 6 = 8$	4 steps on 2x 2 steps on 4x 1 step on 8x
Add $5 + 6 = 11$	1 step on 11x
Subtract $5 - 2 = 3$	1 step on 3x
Subtract $6 - 2 = 4$	2 steps on 2x 1 step on 4x
Multiply $2 \times 5 = 10$	5 steps on 2x 2 steps on 5x 1 step on 10x
Multiply $2 \times 6 = 12$	6 steps on 2x 4 steps on 3x 3 step on 4x 2 steps on 6x 1 step on 12x
Multiply $5 \times 6 = 30$	15 steps on 2x 10 steps on 3x 6 step on 5x 5 steps on 6x 3 step on 10x
Divide $6 \div 2 = 3$	1 step on 3x