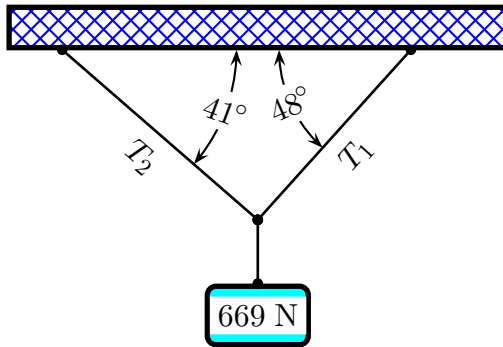This print-out should have 6 questions. Multiple-choice questions may continue on the next column or page – find all choices before answering.

001 (part 1 of 2) 10.0 points
Consider the 669 N weight held by two cables shown below. The left-hand cable had tension T_2 and makes an angle of $41°$ with the ceiling. The right-hand cable had tension T_1 and makes an angle of $48°$ with the ceiling.

a) What is the tension in the cable labeled T_1 slanted at an angle of $48°$?
Answer in units of N.

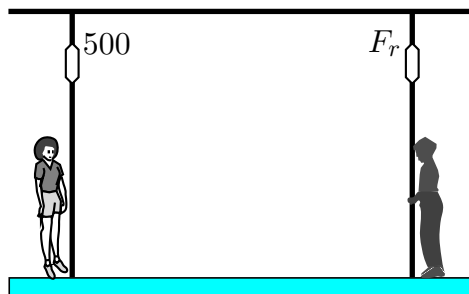**002** (part 2 of 2) 10.0 points
a) What is the tension in the cable labeled T_2 slanted at an angle of $41°$?
Answer in units of N.

003 10.0 points
A staging that weighs 290 N supports two painters, one 430 N and the other 490 N. The reading in the left scale is $F_\ell = 500$ N.
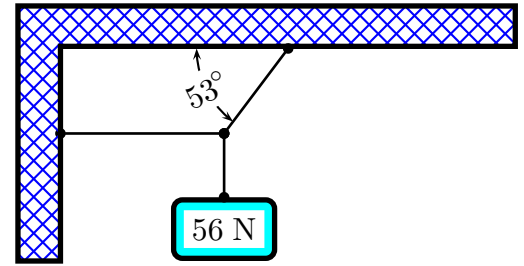

What is the reading F_r in the right hand scale?
Answer in units of N.

004 (part 1 of 2) 10.0 points

Consider the 56 N weight held by two cables shown below. The left-hand cable is horizontal.

a) What is the tension in the cable slanted at an angle of $53°$?
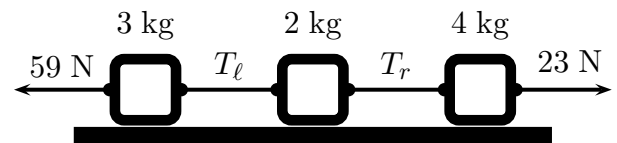Answer in units of N.

005 (part 2 of 2) 10.0 points
b) What is the tension in the horizontal cable?
Answer in units of N.

006 10.0 points
Three blocks are on a frictionless horizontal surface. The bocks are connected by massless strings with tensions T_ℓ and T_r.

Calculate the tension T_ℓ.

1. $T_\ell = 41$ N

2. $T_\ell = 35$ N

3. $T_\ell = 47$ N

4. $T_\ell = 21$ N

5. $T_\ell = 59$ N

6. $T_\ell = 70$ N

7. $T_\ell = 58$ N

8. $T_\ell = 43$ N

9. $T_\ell = 74$ N

10. $T_\ell = 39$ N