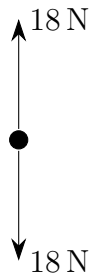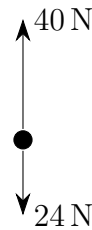# Net Force Practice

1. In each of the free-body diagrams below, calculate the **magnitude** and **direction** of the net force and draw it.

(a)

18 N
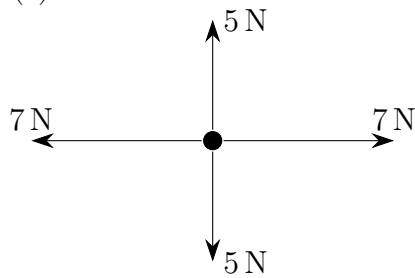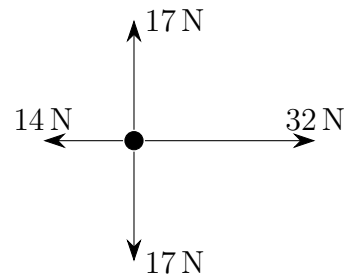
18 N

$F_{NET} = $ _____ N, _____

(b)

40 N

24 N

$F_{NET} = $ _____ N, _____

(c)

5 N

7 N   7 N

5 N

$F_{NET} = $ _____ N, _____

(d)

17 N

14 N   32 N

17 N
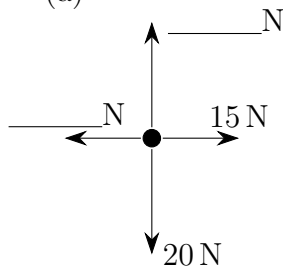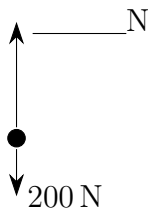
$F_{NET} = $ _____ N, _____

2. In each of the free-body diagrams below, the net force is given, but one or more of the applied forces is missing. Find the missing forces.
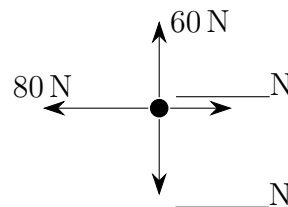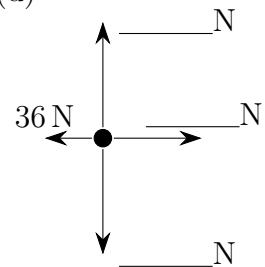
(a)

_____ N

_____ N   15 N

20 N

$F_{NET} = 0$ N

(b)

_____ N

200 N

$F_{NET} = 150$ N, up

(c)

60 N

80 N   _____ N

_____ N

$F_{NET} = 45$ N, left

(d)

_____ N

36 N   _____ N

_____ N

$F_{NET} = 23$ N, right

3. Fill in the blanks in each of the situations depicted below. Draw the net force.

(a)

_____ N

5 N

_____ N

29.4 N

$F_{NET} =$ 23 N, right

(b)

19.6 N

_____ N

_____ N

$F_{NET} =$ 16 N, left

(c)

15 N

_____ N

7 N

_____ N

$F_{NET} =$ 60 N, left

(d)

23 N

17 N

_____ N

_____ N
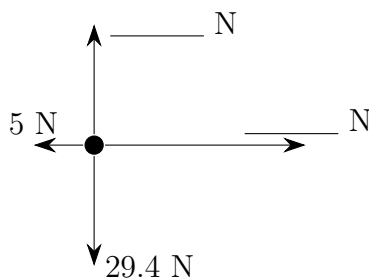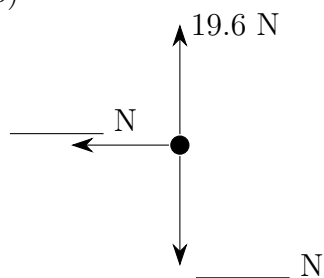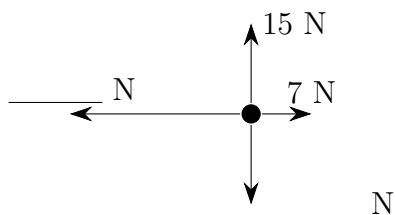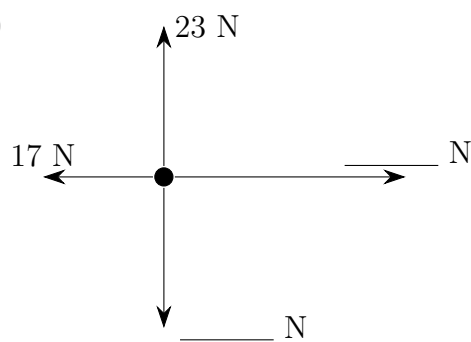
$F_{NET} =$ 54 N, right

4. In your own words, explain how you find the *net force*.