PhyzJob: Numeric Vector Addition

FELIX

Consider the following force vectors.

A = (4N, 7N) **B** = (-10N, -1N) **C** = (-5N, 5N) **D** = (7N, -4N)

E = (12N, 7N) **F** = (8N, 0N) **G** = (0N, 4N)

Determine the resultant vector for each addition specified below.

1. **H = A + B**

H = (4N + -10N, 7N + -1N)
H = (-6N, 6N)

2. **J = C + D**

J = (-5N + 7N, 5N + -4N)
J = (2N, 1N)

3. **K = D + B**

K = (7N + -10N, -4N + -1N)
K = (-3N, -5N)

4. **M = E – F**

M = (12N – 8N, 7N – 0N))
M = (4N, 7N)

5. **N = G – D**

N = (0N – 7N, 4N – -4N)
N = (-7N, 8N)

6. **P = C – B**

P = (-5N – -10N, 5N – -1N)
P = (5N, 6N)

7. **Q = A + D – E + G**

Q_x = 4N + 7N – 12N +0N = -1N
Q_y = 7N + -4N – 7N + 4N = 0N
Q = (-1N, 0N)

8. **R = F + C – B – D**

R_x = 8N + -5N – -10N –7N = 6N
R_y = 0N + 5N – -1N – -4N = 10N
R = (6N, 10N)