5. a) $(0,0),(10,8)$

$\vec{a} = \dfrac{18-0}{10-0} = 1.8 \text{ m/s}^2$

b) $(20,18),(35,0)$

$\vec{a} = \dfrac{18-0}{20-35} = -1.2 \text{ m/s}^2$

c) $(45,0),(55,-24)$

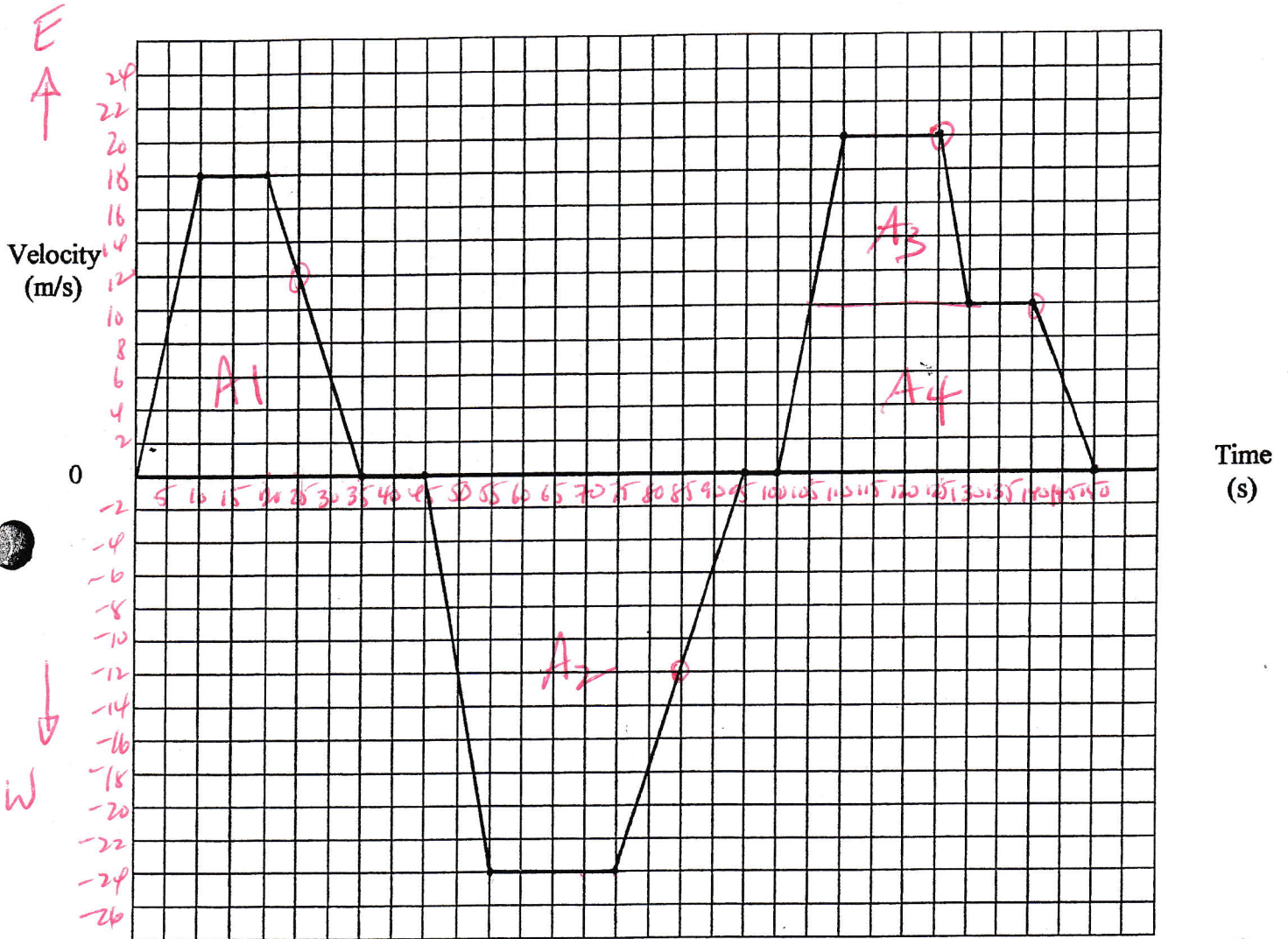$\vec{a} = \dfrac{0+24}{45-55} = -2.4 \text{ m/s}^2$

d) 0 m/s^2

e) $(75,-24),(95,0)$

$\vec{a} = \dfrac{0+24}{95-75} = 1.2 \text{ m/s}^2$

f) $(140,10),(150,0)$

$\vec{a} = \dfrac{0-10}{150-140} = -1.0 \text{ m/s}$

$A_1 = \frac{1}{2}(35+10)18$ 　 $A_2 = \frac{1}{2}(20+50)(24)$ 　 $A_3 = \frac{1}{2}(25+15)10$ 　 $A_4 = \frac{1}{2}(50+35)10$

$A_1 = 405 \text{ m}$ 　 $A_2 = 840 \text{ m}$ 　 $A_3 = 200 \text{ m}$ 　 $A_4 = 425 \text{ m}$

In the above graph, the positive direction is east. Each block represents 2 m/s on the vertical axis and 5 s on the horizontal axis.

7. $\vec{\Delta d} = 405\text{m} - 840\text{m} + 200\text{m} + 425\text{m} = 190\text{m}$

8. $d = 405\text{m} + 840\text{m} + 200\text{m} + 425\text{m} = 1870\text{m}$

9. $\vec{V}_{ave} = \dfrac{190\text{m}}{150\text{s}} = 1.27 \text{ m/s}$

10. $V_{ave} = \dfrac{1870}{150} = 12.15 \text{ m/s}$

11. $(25,12),(125,20)$

$\vec{a} = \dfrac{12-20}{25-125} = 0.080 \text{ m/s}^2$

12. $\vec{V}_{ave} = \dfrac{-840\text{m}}{50\text{s}} = -16.8 \dfrac{\text{m}}{\text{s}}$

$\dfrac{425}{200}$
$\overline{}$
5
625