4.5 Practice – Using Graphs to Estimate Values

**1.** The graph on the right represents a linear relation.

1. Determine the value of *x* for each value of *y*.

**i)** *y* = 1

**ii)** *y* = 3

**iii)** *y* = 0

**b)** Determine the value of *y* for each value of *x*.

**i)** *x* = 2

**ii)** *x* = 8

**iii)** *x* = –6

**2.** The graph on the right represents a linear relation.

1. Determine the value of *x* for each value of *y*.



**i)** *y* = 3

**ii)** *y* = –2

**iii)** *y* = 7

1. Determine the value of *y* for each value of *x*.

**i)** *x* = 0

**ii)** *x* = –2

**iii)** *x* = –4

**3.** This graph represents a linear relation.

1. Determine the value of *x* for each value of *y*.

**i)** *y* = 2

**ii)** *y* = 0

**iii)** *y* = 5

1. Determine the value of *y* for each value of *x*.

**i)** *x* = 0

**ii)** *x* = 3

**iii)** *x* = –5

**4.** The graph shows how the cost of a long distance call changes with the time for the call.

1. Estimate the cost of a 7-min call. Is this interpolation or extrapolation? Explain.



1. The cost of a call was $1.00. Estimate the time for the call.

1. The cost of a call was $1.50. Estimate the time for the call. Is this interpolation or extrapolation?

4.5 Practice – Answers

**1. a) i)** *x* = 0 **ii)** *x* = 4 **iii)** *x* = –2 **b) i)** *y* = 2 **ii)** *y* = 5 **iii)** *y* = –2

**2. a) i)** *x* = 1 **ii)** *x* = –1.5 **iii)** *x* = 3 **b) i)** *y* = 1 **ii)** *y* = –3 **iii)** *y* = –7

**3.** **a)** **i)** *x* = 1 **ii)** *x* = –1 **iii)** *x* = 4  **b) i)** *y* = 1 **ii)** *y* = 4 **iii)** *y* = –4

**4.** **a)** Approx. $0.56. Interpolation since reading a data point that lies between the plotted points.

**b)** Approx. 13 min

**c)** Approx. 22 min. Extrapolation since reading a data point beyond the plotted points.