Answers

1. a) 80   **b)** 7   **c)** 100

2. a) $C = 22.5s$ **b)** the cost of 1 m of sidewalk   **c)** $15 750

3. a)

Time, t (h)	Pay, p ($)
0	0
1	8
2	16
3	24

b) Graphs may vary depending on scales used.

c) $p = 8t$

4. a)

Mass of Apples, a (kg)	Cost, c ($)
0	0.00
1	1.50
2	3.00
3	4.50

b) Graphs may vary depending on scales used.

c) $c = 1.5a$

5. a) To get the cost of parking, multiply the time parked, in hours, by $2.75. The cost c, in dollars, of parking, varies directly with the time, t, in hours, for which the car is parked.

b) $c = 2.75t$
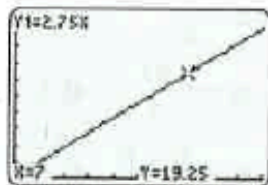
**c)** Answers will vary. Example: about $20

d) $19.25

6. a) To get the cost C, of oranges, multiply the mass r, in kilograms, of oranges, by $2.25.

b) $C = 2.25r$; the constant of variation represents the constant average cost, $2.25/kg.

c) $67.50

7.

a) $V = 125t$, where V is the volume of the water, in litres, and t is the time, in minutes. The constant of variation represents the constant average increase in volume, 125 L/min.

b)
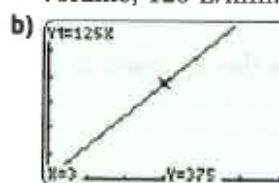
c) 2500 L   **d)** 920 min or 15 h 20 min

e) New equation: $V = 100t$. The graph would still increase to the right, but less steeply. It would take longer to fill the pool.