

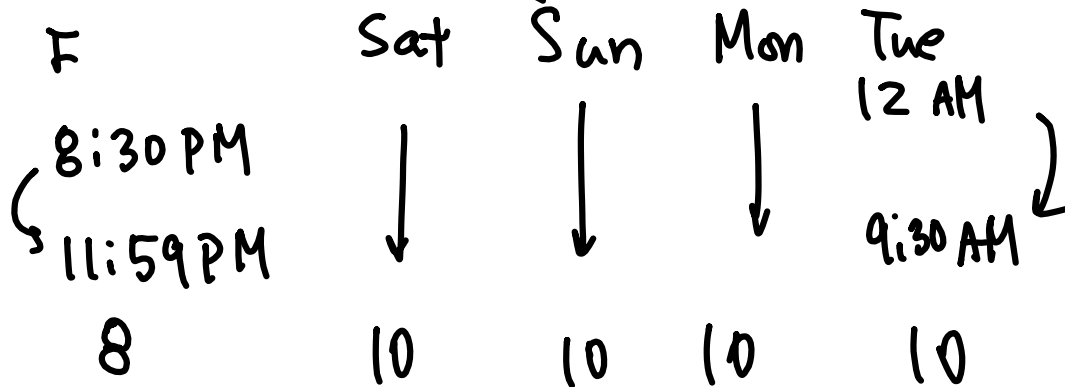
22. The long term parking rate at Raleigh-Durham Airport is \$2 per hour (or part of an hour) with \$10 daily maximum (12:00 a.m. to 12:00 a.m.). Suppose you park your car on Friday afternoon at 8:30 p.m. and pick it up on the following Tuesday at 9:30 a.m., what will be your parking fee?

a) \$58

b) \$50

c) \$48

d) \$38

23. Solve:  $2x(10x + 8) = -3(x+1)$ a)  $x = \frac{3}{4}, \frac{1}{5}$ b)  $x = -\frac{3}{4}, \frac{1}{5}$ c)  $x = -\frac{3}{4}, -\frac{1}{5}$ d)  $x = \frac{3}{4}, -\frac{1}{5}$ 

$$20x^2 + 16x = -3x - 3 \quad 60$$

$$20x^2 + 19x + 3 = 0 \quad 15 \quad 4$$

$$20x^2 + 15x + 4x + 3 = 0$$

$$5x(4x+3) + (4x+3) = 0$$

$$(4x+3)(5x+1) = 0$$

$$\begin{array}{l} \swarrow \\ 4x+3=0 \end{array} \quad \begin{array}{l} \searrow \\ 5x+1=0 \end{array}$$

$$4x = -3 \quad 5x = -1$$

$$x = -\frac{3}{4} \quad x = -\frac{1}{5}$$

24. Solve:  $(2x-3)^2 - 8 = 0$

a)  $x = \frac{3 \pm 2\sqrt{2}}{2}$

b)  $x = 3, -2$

c)  $x = -3 \pm 2\sqrt{2}$

d)  $x = \frac{-3 \pm 2\sqrt{2}}{2}$

$$(2x-3)^2 = 8$$

$$x^2 = 9$$

$$2x-3 = \pm\sqrt{8}$$

$$x = \pm 3$$

$$2x = 3 \pm \sqrt{8}$$

$$x = \frac{3 \pm \sqrt{8}}{2}$$

25. The profit,  $P$ , realized by a company varies directly as the number of products  $s$  it sells. If a company makes a profit of \$7800 on the sale of 325 products, what is the profit when the company sells 5000 products?

a) \$120,000

b) \$100,000

c) \$80,000

d) \$60,000

$$\frac{7800}{325} = \frac{x}{5000}$$

$$x = \frac{7800 \cdot 5000}{325}$$

$$= 120\,000$$

$$ab = a'b'$$

26. If the voltage,  $V$ , in an electric circuit is held constant, the current  $I$ , is inversely proportional to the resistance,  $R$ . If current is 120mA (milliampere) when resistance is 5 ohms, find the current when the resistance is 15 ohms.

a) 40mA

b) 357mA

c) 360mA

d) 200mA

$$120(5) = X(15)$$

$$\frac{600}{15} = X = 40$$