Cell phone plans:

Plan A $50 per month and $0.05 per minute

Plan B $25 per month and $0.25 per minute

After how many minutes will it cost the same under both plans

$50+.05x=25+.25x$

X = # minutes

* Get variables on one side and #s on the other

** Solve for x.

+ v = # + v

$50 + .05x = 25 + .25x$

$-50 \qquad -30$

v = # + v

$.05x = -25 + .25x$

$-.25x \qquad -.25x$

$\frac{-.2x}{-.2} = \frac{-25}{-.2}$

$x = 125$ minutes

Check your answer. Substitute x into the original equation

$$50t + .05(125) = 25t + .25(125)$$

$$56.25 = 56.25$$

Shirley wants to lease her desk:

① Pay $200 and $0.40 per day

or

② $50 down and $0.80 per day

How many days is it before the costs are equal under both plans?

$$200 + .4x = 50 + .8x$$
$$-50 \quad -.4x \quad -50 \quad -.4x$$

$$\frac{150}{.4} = \frac{.4x}{.4}$$

375 days

How many months before the deals are equal?

$199 down and $20 a month membership fee or $40 per month and $0 down.

$$199 + 20x = 0 + 40x$$
$$-20x \qquad\qquad -20x$$

$$\frac{199}{20} = \frac{20x}{20}$$

$$x = 10 \text{ mo}$$