

8-29-08

Gym

This problem gives you the chance to:

- select relevant data and operations
- solve a practical money problem

Carlo wants to join a gym.

The gym offers three membership options.

$$\begin{array}{r} 20 \\ \times 6 \\ \hline 120 \end{array}$$

Pay as you go
Pay only \$6 each
time you work out

Regular deal
Pay \$50 a month
and \$2 each
time you work
out

$$\begin{array}{r} 12 \\ 50 \\ \hline 6000 \\ 940 \\ \hline 6240 \end{array} \quad \begin{array}{r} 20 \\ \times 12 \\ \hline 40 \\ 200 \\ \hline \end{array}$$

All-in-one price!
Pay just \$100 per month for
unlimited use of our great
facilities.

1. Carlo thinks he will go to the gym about 20 times a month.
Calculate how much each of these options would cost Carlo for one month.

Pay as you go

Regular deal

All-in-one price

Which of these options is the least expensive for Carlo?

\$ 120.60 ✗

\$ 90.00 ✓

\$ 100.00 ✓ (2)

regular deal

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

$$\begin{array}{r} 100 \\ \times 3 \\ \hline 300 \end{array}$$

$$\begin{array}{r} 90 \\ \times 3 \\ \hline 270 \end{array}$$

$$\begin{array}{r} 90 \\ \times 4 \\ \hline 360 \end{array}$$

$$\begin{array}{r} 90 \\ \times 10 \\ \hline 900 \end{array}$$

$$\begin{array}{r} 90 \\ \times 10 \\ \hline 900 \end{array}$$

150 X

Explain how you figured it out.

Well i did 9×3 and that didnt end with a zero so i kept on times stuff by nine until a zero was at the end

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

$$\begin{array}{r} 12 \\ \times 20 \\ \hline 240 \end{array}$$

$$\begin{array}{r} 365 \\ \times 2 \\ \hline 730 \end{array}$$

730

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 180 \end{array}$$

$$\begin{array}{r} 150 \\ \times 12 \\ \hline 1800 \end{array}$$

\$2180 X

Calculate the cost of using the Superfit Gym for one year.

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$4400 X

Show your work.

$$\begin{array}{r} 12 \\ 6240 \\ 1840 \\ \hline 8080 \end{array}$$

$$\begin{array}{r} 1400 \\ \times 3 \\ \hline 4200 \end{array}$$



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1. Carlo thinks he will go to the gym about 20 times a month.
Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120 ✓

Regular deal

\$ 90 ✓

All-in-one price

\$ 100 ✓

Which of these options is the least expensive for Carlo?

Regular Deal

3

$$\begin{array}{r} 100 \\ \times 12 \\ \hline 1200 \end{array}$$

$$\begin{array}{r} 100 \\ \times 20 \\ \hline 2000 \\ 1000 \\ \hline 3000 \end{array}$$

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

25 times

Explain how you figured it out.

50 + 40 would equal 90. If you want
it to equal 100 it would be 50+50
so $50 \div 2 = 25$.

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

\$520 x

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$780 x

Show your work.

$$\begin{array}{r} 300 \\ 180 \\ +40 \\ \hline \$520 \end{array}$$

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 180 \end{array}$$

$$\begin{array}{r} 20 \\ \times 2 \\ \hline 40 \end{array}$$



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1. Carlo thinks he will go to the gym about 20 times a month.

Calculate how much each of these options would cost Carlo for one month.

Pay as you go $6 \times 20 = 120$

Regular deal $(50 \times 30) + (2 \times 30) =$

All-in-one price

\$	120	✓	
\$	90	✓	
\$	100	✓	3
	<u>Regular deal</u>		

Which of these options is the least expensive for Carlo?

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

$$60 = 50 + 2 \cdot 25 \quad \checkmark$$

$$50 + 50 = 100$$

Explain how you figured it out.

All in one price is 60 and \$50 a month plus \$2 every visit. Then $2 \times 25 = 50 + 50 = 100$.

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

$$300 + 15 \cdot 12 = 300 + 180 = 480$$

$$12 \cdot 20 = 240$$

Calculate the cost of using the Superfit Gym for one year.

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

$$480 - 240 = 240$$

Show your work.

$\begin{array}{r} + 300 \\ 730 \\ \hline 190 \\ \hline 1210 \end{array}$	$300 + 15 \cdot 12 = 180$	$\begin{array}{r} 1330 \\ 1210 \\ \hline 120 \end{array}$	1210
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Gym

Perkins

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facilities

1. Carlo thinks he will go to the gym about 20 times a month.
Calculate how much each of these options would cost Carlo for one month.

Pay as you go

$20 \times 6 = 120$

\$ 120.00 ✓

Regular deal

$50 + 20 \times 2 = 90$

\$ 90.00 ✓

All-in-one price

\$100 = 1 month

\$ 100.00 ✓

Which of these options is the least expensive for Carlo?

Regular Deal

3

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

25 ✓

Explain how you figured it out.

For all-in-one price is only to pay 100 dollars a month, so that would = 100 dollars. For the Regular Deal you pay 50 a month, and 2 every time you work out, $50 + 2 = 25$ so $25 \times 2 = 50$, $50 + 50 = 100$

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

\$960 ✓

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$120 ✓

Show your work.

Handwritten calculations showing the cost breakdown for the Superfit Gym and the comparison with the Regular deal.

$$\begin{array}{r} 115 \\ \times 12 \\ \hline 300 \\ + 150 \\ \hline 450 \end{array}$$

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 30 \\ + 180 \\ \hline 210 \end{array}$$

$$\begin{array}{r} 240 \\ \times 12 \\ \hline 480 \\ + 480 \\ \hline 960 \end{array}$$

$$\begin{array}{r} 90 \\ \times 12 \\ \hline 180 \\ + 900 \\ \hline 1080 \end{array}$$

$$\begin{array}{r} 1080 \\ - 960 \\ \hline 120 \end{array}$$

Additional scribbled-out calculations are present, including $1080 - 960 = 120$ and $1080 - 960 = 120$.



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facilities

1. Carlo thinks he will go to the gym about 20 times a month.

Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120 ✓

Regular deal

\$ 90 ✓

All-in-one price

\$ 100 ✓

Which of these options is the least expensive for Carlo?

Regular deal 3

$$\begin{array}{r} 20 \\ \times 6 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 20 \\ \times 2 \\ \hline 40 \end{array}$$

$$\begin{array}{r} 50 \\ + 40 \\ \hline 90 \end{array}$$

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

25 ✓ 1

Explain how you figured it out.

I ~~at~~ the All-in-one deal is \$100
and you have to pay \$50 as a
start for the regular deal you
have to visit 25 times because $25 \times 2 = 50$ ✓

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

\$960 ✓ 12

Calculate the cost of using the Superfit Gym for one year.

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$160 × 0

Show your work.

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 30 \\ 150 \\ \hline 180 \end{array}$$

$$\begin{array}{r} 20 \\ \times 12 \\ \hline 40 \\ 200 \\ \hline 240 \\ \times 2 \\ \hline 480 \end{array}$$

180, 480, 300

$$\begin{array}{r} 90 \\ \times 12 \\ \hline 180 \\ 900 \end{array}$$

$$\begin{array}{r} 300 \\ 180 \\ 480 \\ \hline 960 \end{array}$$

$$\begin{array}{r} 90 \\ \times 12 \\ \hline 180 \\ 900 \\ \hline 1080 \end{array}$$

Gym

8/29/08
Per. 6

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time you work out.

Regular deal
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and \$2 each
time you work
out.

Regular deal

$$\begin{array}{r} 20 \times 50 \\ + 2 \times 40 \\ \hline 1000 + 80 \\ \hline 1080 \end{array}$$

All-in-one price!
Pay just \$100 per month for
unlimited use of our great
facilities

Pay as you go

$$\begin{array}{r} 20 \times 6 \\ \hline 120 \end{array}$$

1. Carlo thinks he will go to the gym about 20 times a month.

Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120 ✓

Regular deal

\$ 90 ✓

All-in-one price

\$ 100 ✓

Which of these options is the least expensive for Carlo?

Regular deal 3

1 month \$90
 2 months \$180
 50 days = 100

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same?

20 x 12 = 240 visits a month
 90 x 2 = 180
 180 / 90 = 2
 20 visits a month

Explain how you figured it out.

I know that you would pay \$90 a month for Regular deal and \$180 for 2 months. That is too much, so I tried 20 days and that was too small, then 24 days too small, and then 25 and I go \$100.

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

Show your work.

20 times
 12 days in a year
 20 x 12 = 240 visits
 15 x 240 = 3600
 3600 + 300 = 3900

x25

5

Gym

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~~Pay as you go
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time you work out~~

Regular deal
Pay \$50 a month
and \$2 each
time you work
out

~~All-in-one price!
Pay just \$100 per month for
unlimited use of our great
facilities~~

~~6
10
100~~
$$\begin{array}{r} 50 \\ +40 \\ \hline 90 \end{array}$$

1. Carlo thinks he will go to the gym about 20 times a month.
Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120.⁰⁰ ✓

Regular deal

\$ 90.⁰⁰ ✓

All-in-one price

\$ 100.⁰⁰ ✓

Which of these options is the least expensive for Carlo?

regular deal ✓

3

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same? ✓

25 visits

Explain how you figured it out.

I looked at how many visits it would be normally and it was 20. I divided 10 by 2 and got 5. Which means that he would have to go 5 more times which equals 25.

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

\$960.00 ✓

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$336.00 ✗

Show your work.

$$\begin{array}{r} 20 \\ \times 12 \\ \hline 40 \\ + 200 \\ \hline 240 \end{array}$$

240 visits

$$\begin{array}{r} 300.00 \\ + 180.00 \\ \hline 480.00 \\ \hline 960.00 \end{array}$$

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 30 \\ + 150 \\ \hline 180 \end{array}$$

$$\begin{array}{r} 240 \\ \times 2 \\ \hline 480 \end{array}$$

$$\begin{array}{r} 600 \\ + 24 \\ \hline 624 \\ \times 12 \\ \hline 1248 \\ + 500 \\ \hline 600 \\ \hline 900.00 \\ - 624.00 \\ \hline 276.00 \end{array}$$

⑥

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Carlo wants to join a gym.

The gym offers three membership options.

$$\begin{array}{r} 20 \\ \times 6 \\ \hline 120 \end{array}$$

Pay as you go
Pay only \$6 each
time you work out

Regular deal
Pay \$50 a month
and \$2 each
time you work
out

$$\begin{array}{r} 500 \\ \times 40 \\ \hline 20000 \\ \hline 2000 \\ \hline 22000 \end{array}$$

All-in-one price!
Pay just \$100 per month for
unlimited use of our great
facilities

1. Carlo thinks he will go to the gym about 20 times a month.
Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120 ✓

Regular deal

\$ 90 ✓

All-in-one price

\$ 100 ✓

Which of these options is the least expensive for Carlo?

Regular deal 3

2. How many visits each month would make the cost of the Regular deal and the All-in-one price the same? ✓

25 times a month
to make the regular
deal and the all in
one price the

Explain how you figured it out.

I looked at the All in one price and the regular deal and I thought in my head how many time he would have to go to match the two. It was 25 times a month to match the prices.

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

\$520 X 0

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$1080 X 0

Show your work.

$$\begin{array}{r} 1 \\ 300 \\ + 180 \\ 40 \\ \hline 520 \end{array}$$

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 1130 \\ 150 \\ \hline 180 \end{array}$$

$$\begin{array}{r} 1 \\ 90 \\ \times 12 \\ \hline 1080 \end{array}$$

4

Gym

This problem gives you the chance to:

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20
x 6

222

Carlo wants to join a gym.

The gym offers three membership options.

Handwritten circles representing coins or counts, possibly for a visual model of the costs.

Pay as you go
Pay only \$6 each time you work out

Regular deal
Pay \$50 a month and \$2 each time you work out

All-in-one price!
Pay just \$100 per month for unlimited use of our great facilities

1500
3000

1144

1. Carlo thinks he will go to the gym about 20 times a month. Calculate how much each of these options would cost Carlo for one month.

Pay as you go

\$ 120 ✓

Regular deal

\$ 1,040 x

All-in-one price

\$ 2000 x

Which of these options is the least expensive for Carlo?

pay as you go

(1)

2. How many visits each month would make the cost of the **Regular deal** and the **All-in-one price** the same?

40 X 0

Explain how you figured it out.

guessed. X 0

3. It costs \$300 to join the new Superfit Gym. You then pay \$15 each month and \$2 each time you work out. Carlo thinks he will use the gym about 20 times each month for a year.

Calculate the cost of using the Superfit Gym for one year.

~~\$300~~ 4056 X 0

How much will Carlo save during the first year if he uses the Superfit Gym rather than the Regular deal at the other gym?

\$8,124 X 0

Show your work.

X 0

12480

