

Lesson 7 Multiplication

NAME _____

$$\begin{aligned}
 6 \times 5\frac{3}{4} &= \frac{6}{1} \times \frac{23}{4} \\
 &= \frac{\overset{3}{\cancel{6}} \times 23}{1 \times \underset{2}{\cancel{4}}} \\
 &= \frac{69}{2} \\
 &= 34\frac{1}{2}
 \end{aligned}$$

Rename the numbers as fractions.

Divide the numerator and the denominator by common factors.

Multiply.

Write the product as a mixed numeral in simplest form.

$$\begin{aligned}
 2\frac{2}{3} \times 1\frac{1}{2} \times \frac{4}{5} &= \frac{8}{3} \times \frac{3}{2} \times \frac{4}{5} \\
 &= \frac{\overset{4}{\cancel{8}} \times \overset{1}{\cancel{3}} \times 4}{\underset{1}{\cancel{3}} \times \underset{1}{\cancel{2}} \times 5} \\
 &= \frac{4 \times 1 \times 4}{1 \times 1 \times 5} \\
 &= \frac{16}{5} \text{ or } 3\frac{1}{5}
 \end{aligned}$$

Write each answer in simplest form.

a

b

c

1. $8 \times 2\frac{5}{6}$

$4\frac{2}{3} \times 9$

$3\frac{1}{6} \times 2 \times 9$

2. $1\frac{2}{3} \times 1\frac{1}{5}$

$1\frac{2}{7} \times 2\frac{1}{3}$

$1\frac{1}{3} \times 1\frac{1}{8} \times 1\frac{2}{3}$

3. $1\frac{1}{9} \times \frac{3}{8}$

$\frac{5}{6} \times 1\frac{1}{8}$

$\frac{4}{5} \times 3\frac{1}{2} \times 2\frac{1}{2}$

4. $3\frac{1}{3} \times 1\frac{1}{5}$

$2\frac{2}{5} \times \frac{5}{8}$

$2\frac{1}{3} \times \frac{3}{7} \times \frac{1}{2}$

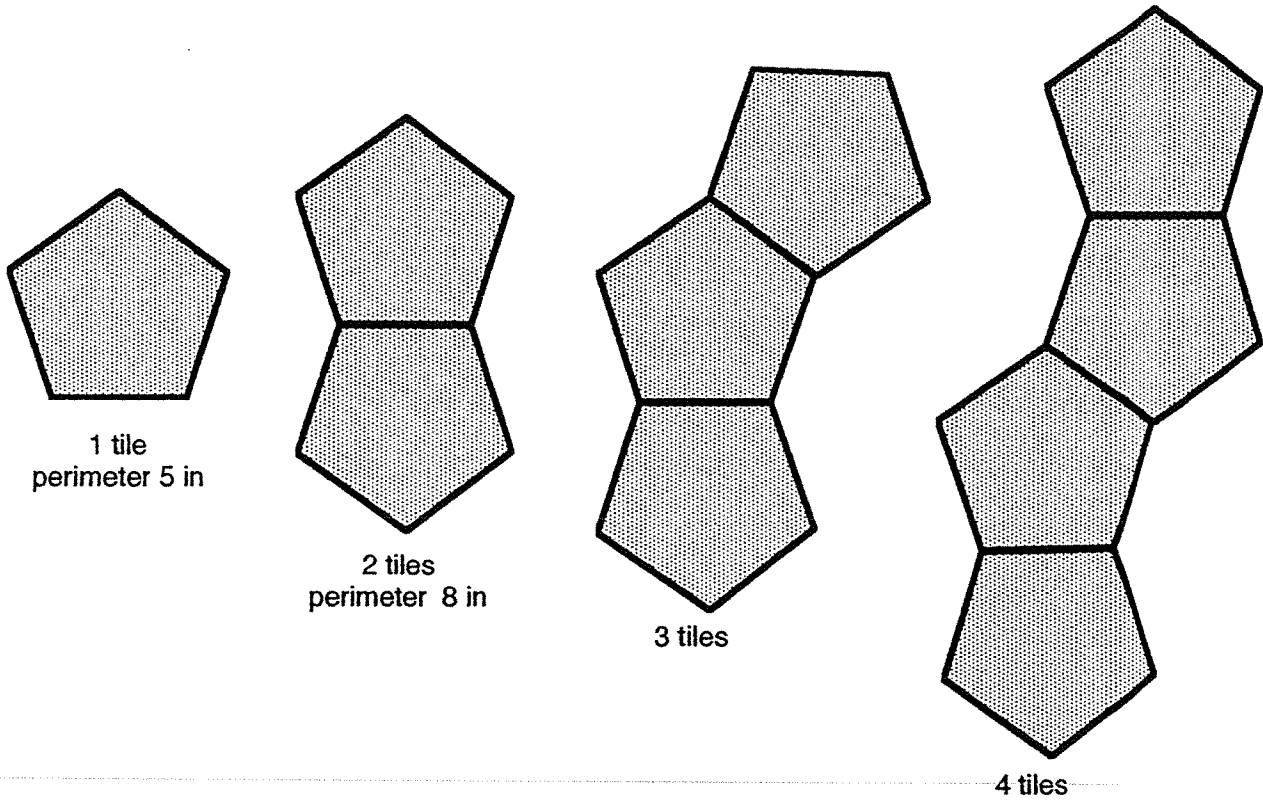
Perfect score: 12 My score: _____

PENTAGONS

This problem gives you the chance to:

- recognize and generalize a number pattern in a geometric situation
- write down a rule for the pattern

Maria has some five sided tiles.
 Each side of her tiles measures 1 inch.
 She arranges her tiles in rows, then she finds the perimeter of each row of tiles.



Maria begins to make a table to show her results.

Number of tiles in a row	Perimeter in inches
1	5
2	8
3	
4	

1. Fill in the empty spaces in Maria's table of results.
2. How long do you think the perimeter of a row of 5 tiles will be? Explain why.

3. How long do you think the perimeter of a row of 10 tiles will be? Explain.

4. The perimeter of a row of tiles is 41 inches.
How many tiles are there in the row? Show how you figured it out.

5. Write down a rule for finding the perimeter of a row containing any number of tiles.

[15]

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.

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	

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? _____

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

Explain how you figured it out.

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.

8