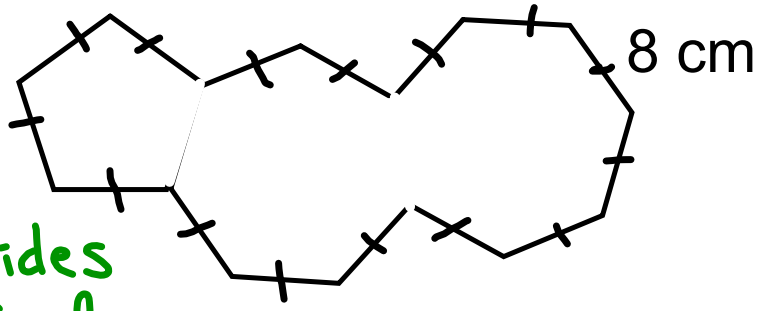
Chapter 6
Geometry & Measurement

a) Find the perimeter of the polygon with all equal sides.
Write a rule to find the perimeter (Show work)



→All sides are equal
→15 sides

P = # sides X length of side
= 15 X 8 cm
= 120 cm

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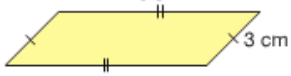
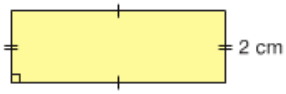
Practice

1. Find the perimeter of each polygon.

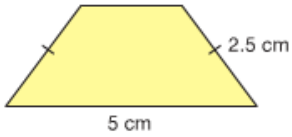
a)



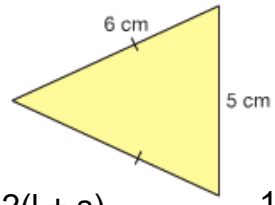
b)



c)



d)



1a) P = 2(l + s)
= 2(8cm + 3cm)
= 2 (11 cm)
= 22 cm

1b) P = 2(l + s)
= 2(6cm + 2cm)
= 2 (8 cm)
= 16 cm

1b) P = 2 s + top + bottom
= 2(2.5 cm) + 2cm + 5 cm
= 5 cm + 2cm + 5 cm
= 12 cm

1d) P = side + side +side
= 6 cm +6 cm +5 cm
= 17 cm

2. Describe the strategy you used to find the perimeter of each polygon in question 1.

(See the first line in each perimeter statement)

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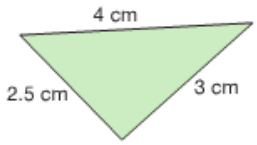
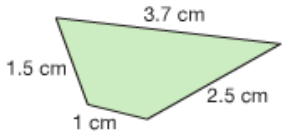
3. Find the perimeter of each polygon.

a)



b)

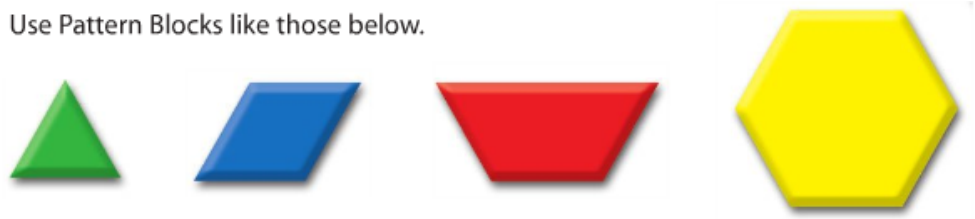


Can you write a rule to find the perimeter of each of these polygons? Why or why not? Cannot since no sides are equal

3a) P = side + side +side
= 4 cm + 3 cm + 2.5 cm
= 9.5 cm

3b) P = side + side +side + side
= 1.5 cm + 3.7 cm + 2.5 cm + 1 cm
= 8.7 cm

4. Use Pattern Blocks like those below.



Write a rule to find the perimeter of each Pattern Block.

perimeter of Equilateral triangle = 3 (side)

perimeter of rhombus = 2(s + l)

perimeter of Trapezoid = 2(side) + top + bottom

perimeter of Regular Hexagon = 6 (side)

5. Aldo wants to install a skylight in the roof of his house. The base of the skylight is a regular hexagon with side length 40 cm. What is the perimeter of the base of the skylight? Give your answer in metres.
Which strategy did you use to find out?

regular hexagon has 6 equal sides

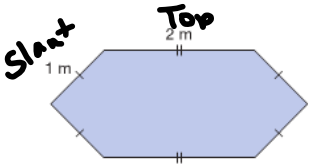
P of regular hexagons = 6(side)

= 6 (40 cm)

= 240 cm since 100cm =1 m

= 2.4 m

6. Winnie is building a hexagonal storage box. Here is a drawing of the top of the box.
   a) Write a rule to find the perimeter of the top of the box.
   b) Write the rule as a formula.
   c) What is the perimeter of the top of the box?



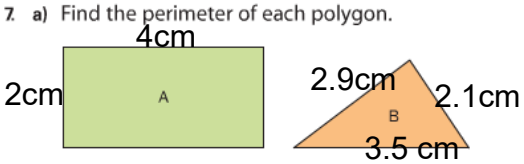
b Per = 4(slant) + 2(top)

c) Per = 4(1m) + 2 (2m)

= 4 m + 4 m

= 8 m

7. a) Find the perimeter of each polygon.



   b) Suppose the side lengths of each polygon are doubled. What would happen to each perimeter? Explain.

7a) Per Rec= 2(l + w)

= 2(4cm + 2cm)

= 2(6 cm)

= 12 cm

Per tri = side + side + side

= 2.9 cm + 2.1 cm + 3.5 cm

= 8.5 cm

7b) If the side lengths double the perimeter would double

Doubled

Per Rec= 2(l + w)

= 2(8cm + 4cm)

= 2(12 cm)

= 24 cm

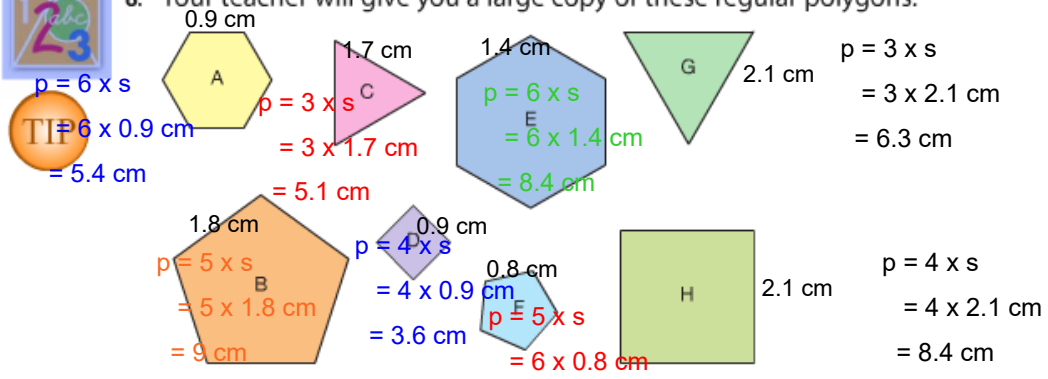
Per tri = side + side + side

= 5.8 cm + 4.2 cm + 7 cm

= 17 cm

c) When you double the side length the Perimeter doubles

8. Your teacher will give you a large copy of these regular polygons.



a) Find and record the perimeter of each polygon.

b) How is the perimeter of a regular polygon related to the number of its sides?
Write a formula to find the perimeter of a regular polygon.

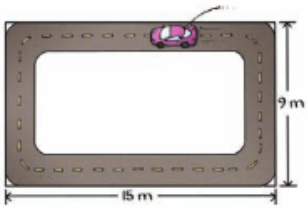
The perimeter is number of sides multiplied by the side length

P of regular polygon = # sides x side length

9. Saki has a remote control car. She enters her car in a race. The track is close to rectangular.

a) Use a formula to find the perimeter of the track.

b) Suppose the car completes 8 laps. How far did the car travel?



9)Per Rec= 2(l + w)

= 2(15 m + 9 cm)

= 2(24 m)

= 48 m

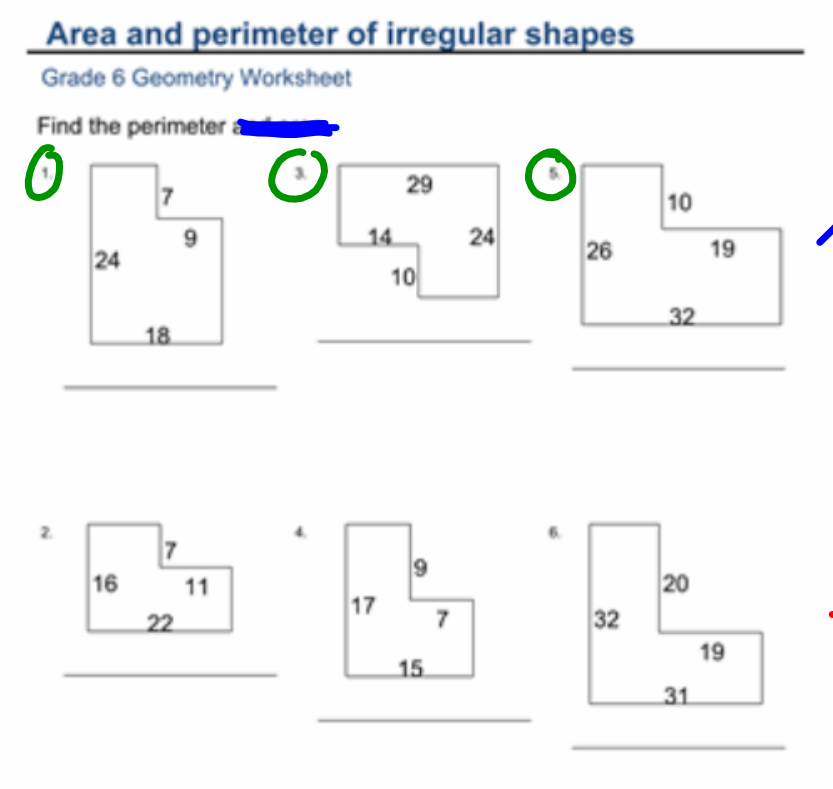
b) 1 lap is 48 m so

8 laps = 48 m x 8

= 384 m

The car travel 384 m in 8 laps

Worksheet



Area and perimeter of irregular shapes

Grade 6 Geometry Worksheet

Find the perimeter a[redacted]

1. 7, 9, 24, 18

3. 29, 14, 24, 10

5. 10, 26, 19, 32

2. 7, 16, 11, 22

4. 9, 17, 7, 15

6. 20, 32, 19, 31

do today

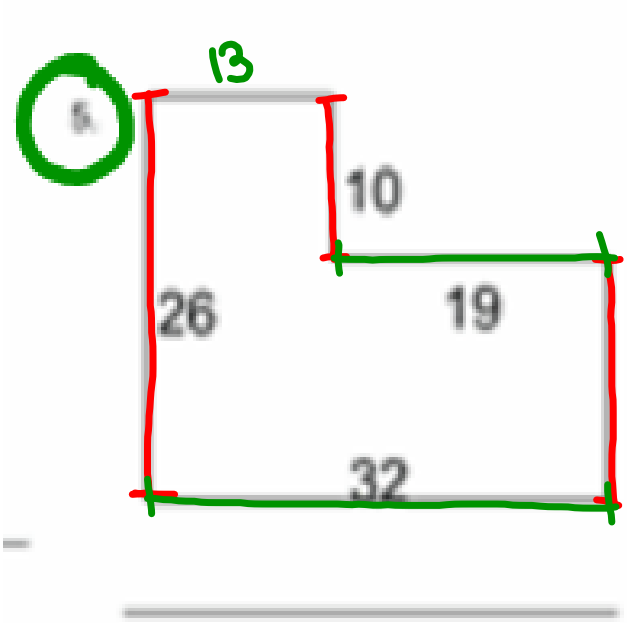
/19

And study for quiz (Tuesday)

→ definition (Study)

→ Angle Sum of △ Find 3rd angle

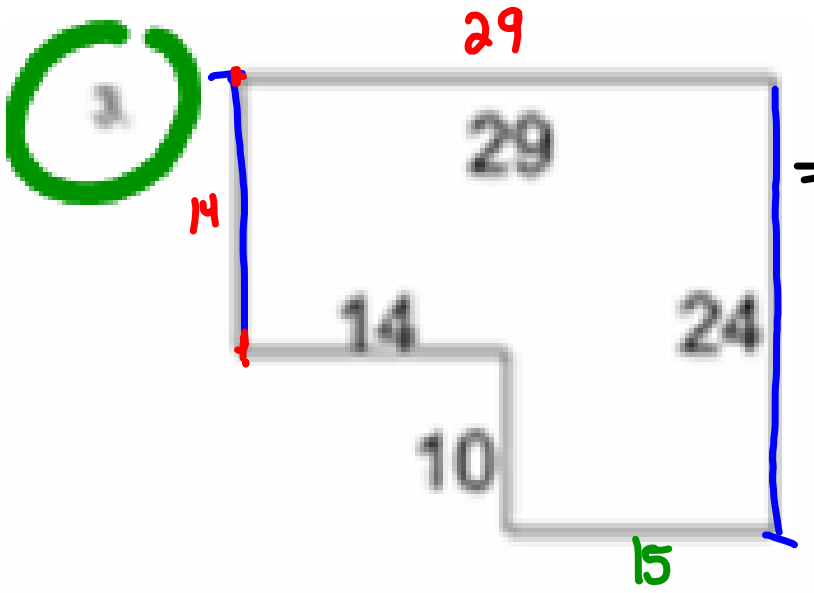
⇒ given triangles you will name based on angles and Side length



$P = s + s + s + s + s + s$

$= 13 + 10 + 19 + 16 + 32 + 26$

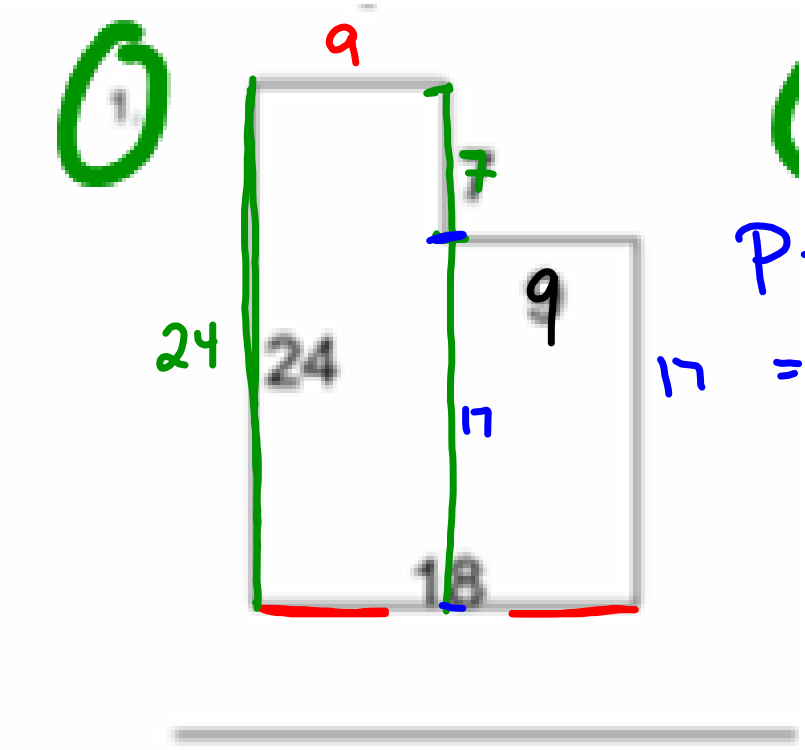
1



$P = S + S + S + S + S + S$

$= 29 + 24 + 15 + 10 + 14 + 14$

$=$



$P = 5+5+5+5+5+5$

$= 9+7+9+17+18+24$