## Understand $\pi$ as a ratio

(1)

a) What is the length of the square?
b) What is the perimeter of the square? $\square$
c) What is the ratio of length : perimeter of the square? $\square$ $\square: \square$
d) Will this ratio always be the same? Talk about it with a partner.
e) Will the ratio be the same for any other shapes? Why?
a)

c)

diameter $=$ $\square$
diameter $=$ $\square$
b)

d)

(3)


What is the diameter of the circle?
diameter $=$ $\square$
How do you know? Talk about it with a partner.
a)

b)

$20 \mathrm{~cm}: 62.8 \mathrm{~cm}=$ $\square$
c)

$\square$
$\square$
$\square$

d)

$\square$

e) What do you notice about your answers?
f) Complete the sentence.

For any circle, the ratio of diameter : circumference can be written as
$\square$ , or more accurately 1 :-
diameter: circumference


The circumference of a circle is equal to $\qquad$
$\mathrm{C}=$ $\square$
6) Calculate the circumference of the circles.
a)

c)

b)

d)


