



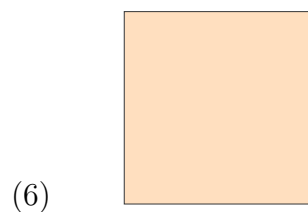
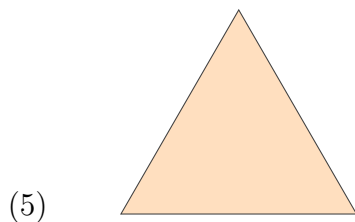
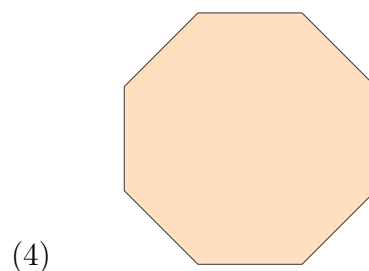
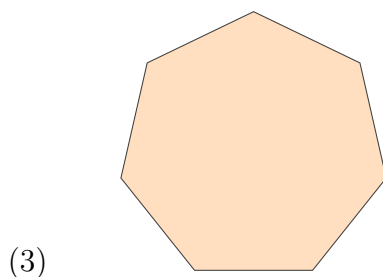
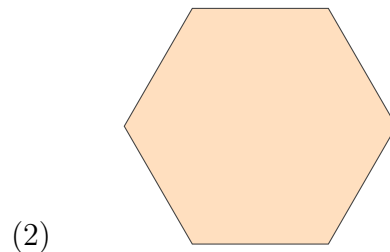
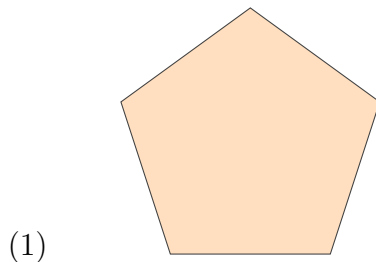
Regular polygon properties

Name _____

Date _____

Find the following characteristics of a regular polygon:

- How many sides does a figure have?
- How many different diagonals does a figure have?
- What is the minimal rotation angle in degrees preserving a figure?
- If a side of a polygon equals 1 m, calculate circumference (P) and area (S)
- Recognize a figure





Answers

Find the following characteristics of a regular polygon:

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- How many different diagonals does a figure have?
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- Recognize a figure

(1) a) 5; b) 5; c) 72; c) $P = 5, S = \frac{5}{4\sqrt{5} - 2\sqrt{5}}$ d) pentagon

(2) a) 6; b) 9; c) 60; c) $P = 6, S = \frac{3\sqrt{3}}{2}$ d) hexagon

(3) a) 7; b) 14; c) 51.4; c) $P = 7, S = \frac{7}{4} \cos \frac{\pi}{7}$ d) heptagon

(4) a) 8; b) 20; c) 45; c) $P = 8, S = 2 \cos \frac{\pi}{8}$ d) octagon

(5) a) 3; b) 0; c) 120; c) $P = 3, S = \frac{\sqrt{3}}{4}$; d) triangle

(6) a) 4; b) 2; c) 90; c) $P = 4, S = 1$; d) square