

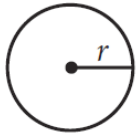


**Titan Learning Center
Mathematics SAT Prep
Week 10 Set B**



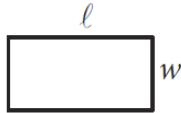
CALCULATOR ALLOWED – Multiple Choice

REFERENCE (This reference sheet is given on the SAT!)

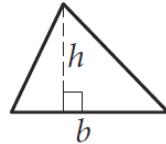


$$A = \pi r^2$$

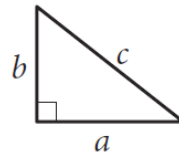
$$C = 2\pi r$$



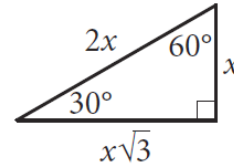
$$A = \ell w$$



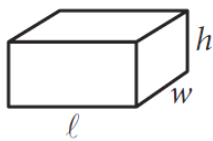
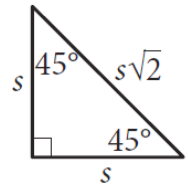
$$A = \frac{1}{2}bh$$



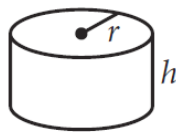
$$c^2 = a^2 + b^2$$



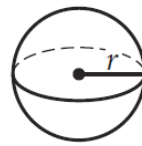
Special Right Triangles



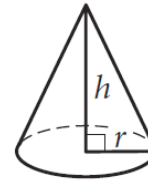
$$V = \ell wh$$



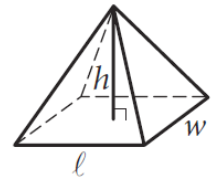
$$V = \pi r^2 h$$



$$V = \frac{4}{3}\pi r^3$$



$$V = \frac{1}{3}\pi r^2 h$$



$$V = \frac{1}{3}\ell wh$$

The number of degrees of arc in a circle is 360.

The number of radians of arc in a circle is 2π .

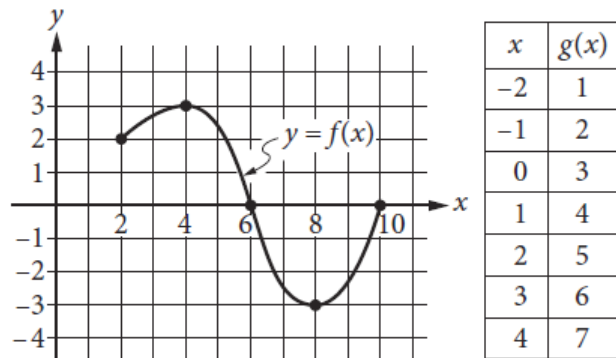
The sum of the measures in degrees of the angles of a triangle is 180.

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A photocopy machine is initially loaded with 5,000 sheets of paper. The machine starts a large job and copies at a constant rate. After 20 minutes, it has used 30% of the paper. Which of the following equations models the number of sheets of paper, p , remaining in the machine m minutes after the machine started printing?

- A) $p = 5,000 - 20m$
- B) $p = 5,000 - 75m$
- C) $p = 5,000(0.3)^{\frac{m}{20}}$
- D) $p = 5,000(0.7)^{\frac{m}{20}}$

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The complete graph of the function f and a table of values for the function g are shown above. The maximum value of f is k . What is the value of $g(k)$?

- A) 7
- B) 6
- C) 3
- D) 0

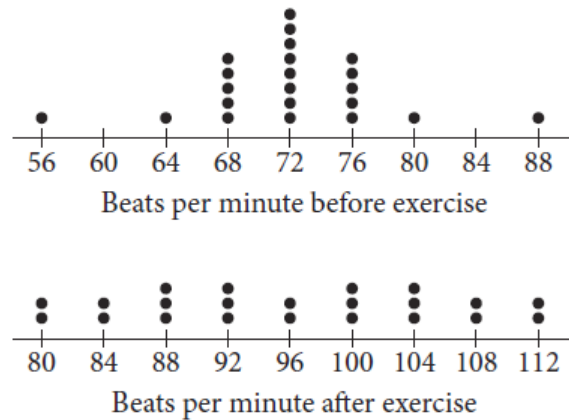
To determine the mean number of children per household in a community, Tabitha surveyed 20 families at a playground. For the 20 families surveyed, the mean number of children per household was 2.4. Which of the following statements must be true?

- A) The mean number of children per household in the community is 2.4.
- B) A determination about the mean number of children per household in the community should not be made because the sample size is too small.
- C) The sampling method is flawed and may produce a biased estimate of the mean number of children per household in the community.
- D) The sampling method is not flawed and is likely to produce an unbiased estimate of the mean number of children per household in the community.

In the xy -plane, the point (p, r) lies on the line with equation $y = x + b$, where b is a constant. The point with coordinates $(2p, 5r)$ lies on the line with equation $y = 2x + b$. If $p \neq 0$, what is the value of $\frac{r}{p}$?

- A) $\frac{2}{5}$
- B) $\frac{3}{4}$
- C) $\frac{4}{3}$
- D) $\frac{5}{2}$

The 22 students in a health class conducted an experiment in which they each recorded their pulse rates, in beats per minute, before and after completing a light exercise routine. The dot plots below display the results.



Let s_1 and r_1 be the standard deviation and range, respectively, of the data before exercise, and let s_2 and r_2 be the standard deviation and range, respectively, of the data after exercise. Which of the following is true?

- A) $s_1 = s_2$ and $r_1 = r_2$
- B) $s_1 < s_2$ and $r_1 < r_2$
- C) $s_1 > s_2$ and $r_1 > r_2$
- D) $s_1 \neq s_2$ and $r_1 = r_2$

TLC Stamp

