

TABS 1982

TEXAS ASSESSMENT
OF BASIC SKILLS

BARRELS OF CRUDE OIL EXPORTED MONTHLY	
	☐ = 1 Million Barrels
Texas	☐☐☐☐☐
Alaska	☐☐☐☐☐☐
Pennsylvania	☐☐
California	☐☐☐
Louisiana	☐☐

Which state exports the least amount of barrels of crude oil monthly?

- A Louisiana
- B Texas
- C Alaska
- D Pennsylvania

ANSWER:

Which state exports the least amount of barrels of crude oil monthly?

- A Louisiana
- B Texas
- C Alaska
- D Pennsylvania

WHAT DOES IT TAKE TO SOLVE?

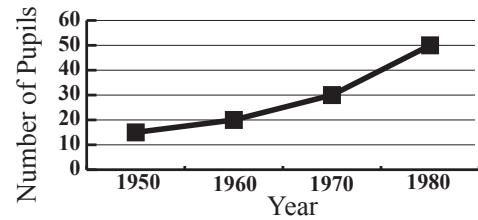
One step:

- fewest barrels

TEAMS 1986

TEXAS EDUCATIONAL
ASSESSMENT OF MINIMAL
SKILLS

ENROLLMENT IN BRITTON PRE-SCHOOL



In 1970, tuition at Britton Pre-School was \$300 per pupil. According to this graph, how much money was collected in 1970?

- A \$9000
- B \$900
- C \$600
- D \$6000

ANSWER:

In 1970, tuition at Britton Pre-School was \$300 per pupil. According to this graph, how much money was collected in 1970?

- A \$9000
- B \$900
- C \$600
- D \$6000

WHAT DOES IT TAKE TO SOLVE?

Two steps:

- Find point on graph
- Multiply
 $30 \text{ pupils} \times \$300 = \$9,000$

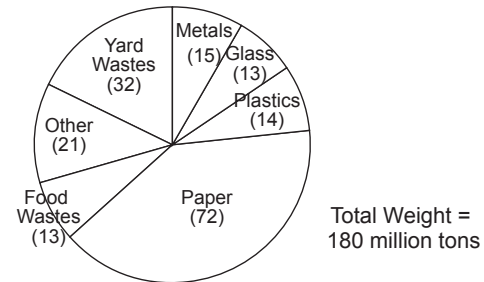
TAAS 1990

TEXAS ASSESSMENT OF
ACADEMIC SKILLS

The graph shows the types and amounts of solid waste produced in the United States in 1988.

Municipal Solid Waste —1988

(millions of tons)



What percent of the total solid waste was paper?

- A 25%
- B $33\frac{1}{3}\%$
- C 40%
- D $66\frac{2}{3}\%$
- E 72%

ANSWER:

What percent of the total solid waste was paper?

- A 25%
- B $33\frac{1}{3}\%$
- C 40%
- D $66\frac{2}{3}\%$
- E 72%

WHAT DOES IT TAKE TO SOLVE?

Three steps:

- Find paper on pie chart
- Divide tons of paper by total tons: $72/180$
- Convert to 40%

TAKS 2002

TEXAS ASSESSMENT OF
KNOWLEDGE AND SKILLS

The student council sponsor is planning to make a circle graph showing the number of votes for each of the candidates for student council president. The table below indicates the name and the vote count for each candidate.

Number of Votes per Candidate

Bridget	240
Hakeem	420
Maria	180
Viera	300
Tony	60

What central angle should the sponsor use for the section representing the votes for the student who finished in third place?

- A 54°
- B 72°
- C 90°
- D 126°

ANSWER:

What central angle should the sponsor use for the section representing the votes for the student who finished in third place?

- A 54°
- B 72°
- C 90°
- D 126°

WHAT DOES IT TAKE TO SOLVE?

Five steps:

- Add all votes
 $240 + 420 + 180 + 300 + 60 = 1,200$
- Determine which student finished 3rd (Bridget: 240 votes)
- Determine Bridget's %age of votes
 $240 / 1,200 = 20\%$
- Know that a pie chart has 360 total degrees
- Determine 20% of 360 degrees:
 $.20 \times 360 = 72$

STAAR

2012 and Beyond
STATE OF TEXAS
ASSESSMENT OF
ACADEMIC READINESS

HYPOTHETICAL QUESTION

Which of the following is the correct description of the graph of a quadratic function given by $f(x) = ax^2 + bx + c$, $a \neq 0$?

- A If $b^2 - 4ac > 0$ then the graph of the function intersects the x-axis twice.
- B If $b^2 - 4ac < 0$ then the graph of the function does not intersect the y-axis.
- C If $b^2 - 4ac = 0$ then the graph does not intersect the x-axis.
- D If $\sqrt{b^2 - 4ac} < 0$ then the graph not intersect the x-axis.

ANSWER:

- A If $b^2 - 4ac > 0$ then the graph of the function intersects the x-axis twice.
- B If $b^2 - 4ac < 0$ then the graph of the function does not intersect the y-axis.
- C If $b^2 - 4ac = 0$ then the graph does not intersect the x-axis.
- D If $\sqrt{b^2 - 4ac} < 0$ then the graph not intersect the x-axis.

WHAT DOES IT TAKE TO SOLVE?

Five steps:

- The student must know how to apply the quadratic formula to find the value of the discriminant $b^2 - 4ac$
- Find quadratic equation on formula chart

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

- If $b^2 - 4ac > 0$ there are two real number roots of the equation and the graph of the parabola crosses the x-axis at those roots
- If $b^2 - 4ac = 0$ there is a "multiple" or repeated root of the equation and the vertex of the graph of the parabola touches the x-axis at that root.
- If $b^2 - 4ac < 0$ the roots of the equation are imaginary numbers and the graph of the parabola does not intersect the x-axis