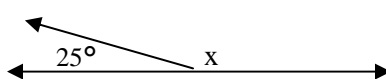


1. How many degrees are in **angle x** in the diagram below?

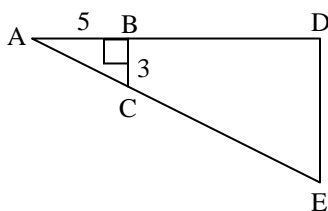
- ① 175°
 ② 165°
 ③ 155°
 ④ 75°
 ⑤ 65°



2. A high speed train can travel as fast as 155 miles per hour. To the nearest ten miles, how many miles can this train travel in 1 hour and 45 minutes?

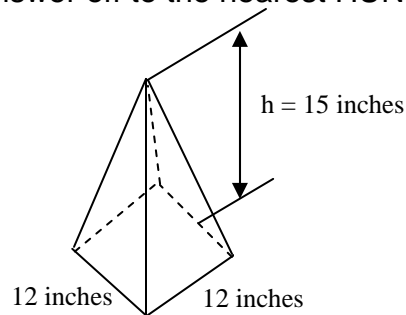
- ① 260 miles
 ② 270 miles
 ③ 280 miles
 ④ 290 miles
 ⑤ 300 miles

3. For this figure, $AD = 30$. What is the length of DE ?



- ① 9
 ② 12
 ③ 15
 ④ 18
 ⑤ 27

4. Find the **volume**, in cubic inches, of the **square pyramid** shown below. Round your answer off to the nearest HUNDRED.



- ① 700 cubic inches
 ② 750 cubic inches
 ③ 800 cubic inches
 ④ 900 cubic inches
 ⑤ 950 cubic inches

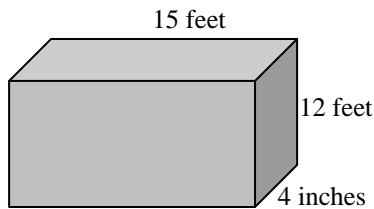
5. Simplify the expression $10^3 - 10^2$.

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

6. The list shows the prices of navel oranges at five different stores. Which store's price is the **lowest**?

Store A:	5 for \$0.99
Store B:	\$0.25 each
Store C:	3 for \$1
Store D:	\$2 a dozen
Store E:	2 for \$0.40

- ① Store A
 ② Store B
 ③ Store C
 ④ Store D
 ⑤ Store E
7. The diagram below shows a wooden form for pouring a concrete patio. Approximately, what is the **volume**, in cubic feet, of the poured concrete?



- ① 40 cubic feet
 ② 50 cubic feet
 ③ 60 cubic feet
 ④ 75 cubic feet
 ⑤ 90 cubic feet
- Problems 8 – 10 refer to the following information.**

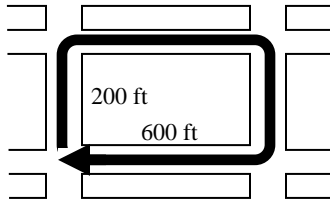
Steve is a carpenter. He charges his customers for time and materials. This means that he bills for each hour that he and his assistant, Diego, work.

Steve also bills for the exact cost of the materials that he uses on the job. The following is a list of the time and materials for the renovation of an enclosed porch.

TIME				
Steve	40 hours	@	\$ 30.00	per hour
Diego	40 hours	@	\$ 12.00	per hour
MATERIALS				
10 sheets	gypsum board	@	\$ 14.00	each
5 boxes	ceramic tiles	@	\$ 20.00	each
assorted	lumber	@	\$ 115.00	

8. Which of the following expresses the **combined** cost of Steve's and Diego's time?
- ① $40(30) + 40(12)$
 ② $40 \times 30 + 12$
 ③ $40 \times 30 \times 12$
 ④ $30(40 + 12)$
 ⑤ $12(40 + 30)$
9. Steve had to pay 6% sales tax on all the materials he used for the job. What is the **sales tax** for all the materials?
- ① \$12.90
 ② \$14.40
 ③ \$17.90
 ④ \$21.30
 ⑤ \$27.30
10. Steve deducts 20% of Diego's wages for taxes and social security. What was Diego's **take home pay** for the renovation job?
- ① \$384
 ② \$396
 ③ \$408
 ④ \$440
 ⑤ \$460

11. The diagram shows the dimensions of the city block where José lives. Which of the following is the **best estimate** of the total distance José must walk **around** the block if he starts and stops at the same point?



- ① 600×200
 ② $2(600) + 2(200)$
 ③ $600 + 200$
 ④ 600×400
 ⑤ $\frac{(600 + 200)}{2}$
12. Laura bought 5 raffle tickets to help support her son's school. The school sold a total of 1000 tickets. What is the **probability** that Laura will win the grand prize?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

13. What is the solution to the equation $x^2 = 1.44$?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

14. At the farthest point in its orbit, the moon is 253,000 miles from Earth. Which of the following represents this number of miles in scientific notation?
- ① 253×10
 ② 2.53×10^3
 ③ 2.53×10^4
 ④ 2.53×10^5
 ⑤ 2.53×10^6

For problems 15 and 16, refer to the table below.

Comparative Price of Souvenir Sweatshirts		
	Wholesale	Retail
Store A	\$10	\$20
Store B	\$12	\$18
Store C	\$15	\$20
Store D	\$16	\$28
Store E	\$20	\$28

15. For which store does the retail price of a sweatshirt show a 50% **markup** over the wholesale price?

① A
② B
③ C
④ D
⑤ E

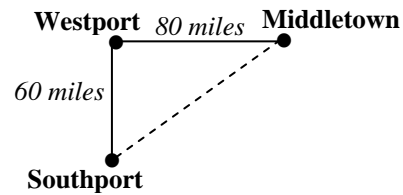
16. The owner of Store A decided to **reduce** the retail price of a sweatshirt by 20%. Find the **sale price** of the sweatshirt.

① \$20
② \$18
③ \$17
④ \$16
⑤ \$15

17. For the equation $y = 2x - 3$, **find the value of y** when $x = 4$.

① $y = 3$
② $y = 4$
③ $y = 5$
④ $y = 7$
⑤ $y = 8$

18. The map shows the distances between towns. Westport is directly west of Middletown, and Southport is directly south of Westport. What is the shortest distance in miles between Middletown and Southport?

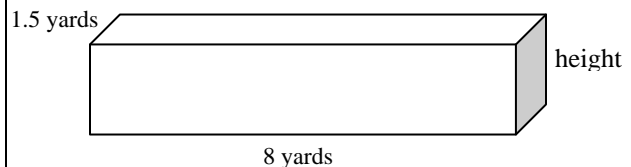


① 160 miles
② 140 miles
③ 120 miles
④ 100 miles
⑤ 90 miles

19. Miguel borrowed a total of \$2000 from his brother to buy a used car. So far, Miguel has paid back \$1200. **What fraction of the total does he still have to pay?**

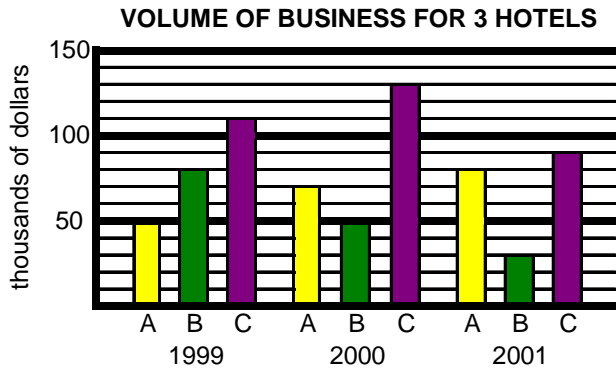
① $\frac{3}{20}$
② $\frac{1}{5}$
③ $\frac{2}{5}$
④ $\frac{3}{5}$
⑤ $\frac{3}{4}$

20. The rectangular solid below has a volume of 24 cubic yards. What is the **height** of the figure in meters?



① 1 yard
② 1.5 yards
③ 2 yards
④ 2.5 yards
⑤ 3 yards

For problems 21 – 23, refer to the graph below.



21. In 2000, the volume of business for Hotel C was **approximately** how many times that of Hotel A?

① 4 times
 ② 3 times
 ③ 2 times
 ④ one half
 ⑤ the same

22. For the three years shown on the graph, which of the following **best estimates** the **mean** amount of yearly business for Hotel A?

① about \$30,000
 ② about \$40,000
 ③ about \$50,000
 ④ about \$60,000
 ⑤ about \$70,000

23. For the periods shown on the graph, which of the following is **true**?

① Hotel A showed a steady increase in business.
 ② Hotel B showed a steady increase in business.
 ③ Hotel A consistently had the lowest volume of business.
 ④ Hotel C had the lowest volume of business.
 ⑤ Hotel A and Hotel C had nearly the same amount of business.

24. A baseball batting average is the number of hits a player gets divided by the number of times the player was at bat (h/b). To the **nearest thousandth**, find the batting average of a player who got 35 hits for 90 times at bat.

① .384
 ② .388
 ③ .389
 ④ .390
 ⑤ .391