

Final Test — Form A

7.RP

7.NS

7.EE

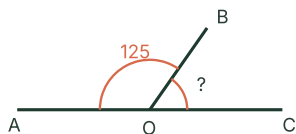
7.G

7.SP

Name _____ Date _____

Grade 7 math final — all topics. Show your work and write each answer in simplest form.

1. Compute $-8 + 5 - (-3)$.
2. A runner jogs $7\frac{1}{2}$ miles in 3 days at the same distance each day. What is the unit rate in miles per day?
3. Compute $(-6) \times (-4) \div 3$.
4. What is 15% of 60?
5. Compute $-\frac{3}{4} + \frac{1}{2}$. Write the answer in simplest form.
6. Solve for x : $3x - 5 = 16$.
7. Expand $4(2x + 3)$.
8. A pair of cleats is marked \$45. The sales tax is 8%. What is the total cost?
9. Compute $\left(-\frac{2}{3}\right) \times \frac{9}{10}$. Write the answer in simplest form.
10. Factor the expression $6x + 15$ by taking out the greatest common factor.
11. In the figure, angles $\angle AOB$ and $\angle BOC$ form a straight line. If $\angle AOB = 125^\circ$, find $\angle BOC$.

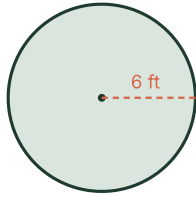


12. Combine like terms: $5x + 8 - 2x - 3$.
13. Which expression is equivalent to $-2(3x - 4)$?

A) $-6x - 8$ B) $-6x + 8$ C) $6x - 8$ D) $-6x + 4$

14. Solve the inequality $2x + 3 \leq 11$.

15. The circle below is the center of the basketball court. Find its circumference and area in terms of π .



16. Compute $-2.4 \div 0.6$.

17. On a map, 1 inch represents 25 miles. Two schools are 4.5 inches apart on the map. What is the actual distance between them?

18. Solve for x : $\frac{x}{4} + 6 = 10$.

19. The table shows the distance d (in meters) a sprinter runs in t seconds at a constant speed. Write an equation that gives d in terms of t , and state the constant of proportionality.

t	2	4	6
d	16	32	48

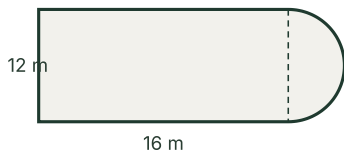
20. A spinner is split into 8 equal sections numbered 1 through 8. What is the probability of landing on a number greater than 5?

A) $\frac{3}{8}$
C) $\frac{5}{8}$

B) $\frac{1}{2}$
D) $\frac{3}{5}$

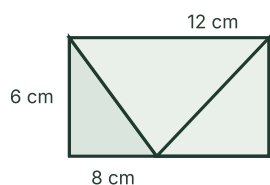
21. A \$60 team jacket is discounted 30%. What is the sale price?

22. Find the area of the composite figure below: a rectangle with a semicircle on its right end.



23. Liam opens a savings account with \$400 that earns 5% simple interest per year. How much interest does it earn in 3 years, and what is the balance then?

24. Find the volume of the triangular prism below. The triangular base has legs 6 cm and 8 cm.



25. A school soccer team played 6 games and scored these numbers of goals: 1, 3, 2, 5, 2, 5. Find the mean and the median number of goals.
26. A rectangular swimming pool is 25 m long and 12 m wide. On a scale drawing, 2 cm represents 5 m. What are the length and width of the pool in the drawing?
27. A coach has \$150 to buy soccer balls that cost \$18 each, plus a fixed \$12 shipping fee. The cost for n balls is $18n + 12$. Write and solve an inequality to find the greatest number of balls she can buy.
28. Maya's first three race times average 52 seconds. Her fourth race time is 48 seconds. What is the percent change in her average time after the fourth race? Round to the nearest tenth of a percent.