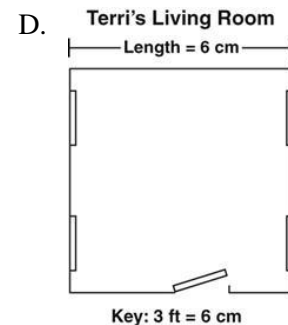
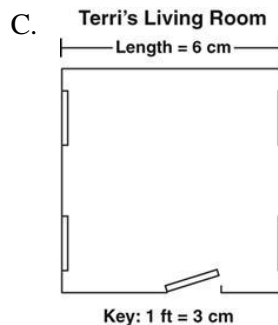
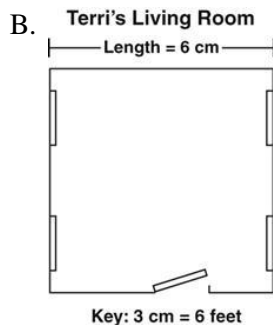
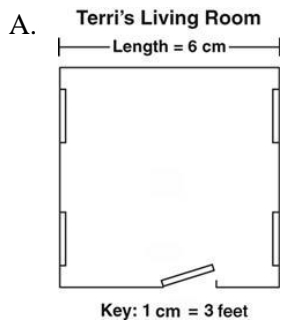


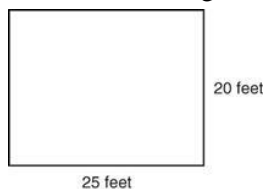
1. The length of Terri's living room is 18 feet. Which of the following illustrations shows Terri's living room drawn correctly to scale?



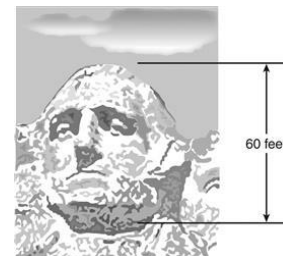
2. Hannah is drawing a map using the scale $\frac{1}{2}$ inch = 20 miles. The towns of Denton and Harper are 56 miles apart. What is the distance in inches between the two cities on the map?



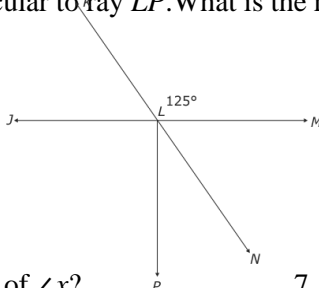
3. Mr. Stewart is making a scale drawing of his classroom. The actual dimensions of the room are shown below. Which dimensions could he use in the scale drawing?



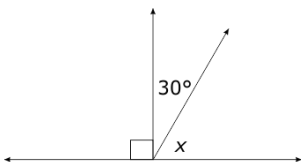
4. At Mount Rushmore, the sculpture of George Washington's head is approximately 60 feet in height. If George Washington's head was approximately $\frac{3}{4}$ foot in height and his nose was 2 inches long, how long is the nose on the sculpture at Mount Rushmore?



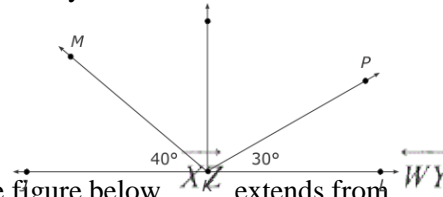
5. In the figure below, line JM is perpendicular to ray LP . What is the measure of angle NLP ?



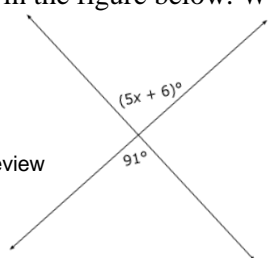
6. In the figure below, what is the measure of $\angle x$?



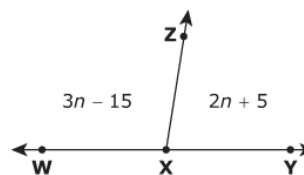
7. In the figure below, $\angle JKM$ and $\angle MKN$ are complementary. What is the measure of $\angle NKP$?



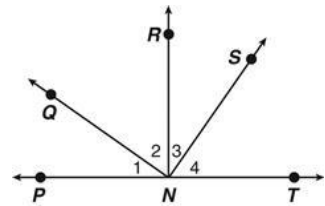
8. Two lines intersect in the figure below. What is the value of x ?



9. In the figure below, XZ extends from WY . What is $m \angle YXZ$?

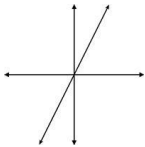


10. In the diagram to the right, $\overline{PT} \perp \overline{NR}$ and $\overline{NQ} \perp \overline{NS}$. If $m\angle 2 = 55^\circ$, what is $m\angle 4$?

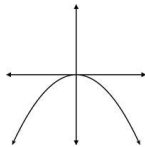


11. Stanley is having wood flooring installed in his living room. The installer has used $10\frac{1}{2}$ boxes of flooring on $\frac{2}{3}$ of the room. How many total boxes of flooring will be needed for Stanley's living room?
12. An experimental vehicle was able to travel $\frac{3}{8}$ mile on $\frac{1}{16}$ gallon of water. At this rate, what was the mileage in miles per gallon of water for this vehicle?
13. A person can read 24 pages of a book in $\frac{1}{3}$ of an hour. What is this person's reading rate in pages per hour?
14. In a fireplace, about $\frac{3}{4}$ of an 18-inch log will burn in $\frac{1}{3}$ of an hour. How many hours will it take to burn $2\frac{1}{2}$ logs?
15. A hiker climbs a 5-mile trail up a mountain in 2 hours. On the return trip downhill, she walks the same trail and returns to her starting point in 1 hour. What was her average rate of speed, in miles per hour, for the entire trip?
16. Which graph represents a direct variation between x and y ?

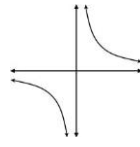
A.



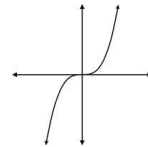
B.



C.

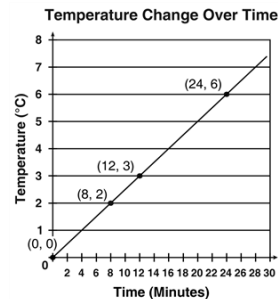


D.



17. The graph shows data from a science experiment in which the temperature of a substance was measured over time.

What is the constant of proportionality for degrees per minute?



18. Maria rides her bicycle a distance, d , of 40 meters. If her riding time, t , is 10 seconds, what is her rate of speed, r , in meters per second?
19. The level of water in a bathtub rises 5 inches in 2 hours. Which of the following represents the rate of change of the water level with respect to the time?
- A. $\frac{5 \text{ inches}}{2 \text{ hours}}$ B. $\frac{2 \text{ inches}}{5 \text{ hours}}$ C. $\frac{5 \text{ hours}}{2 \text{ inches}}$ D. $\frac{2 \text{ hours}}{5 \text{ inches}}$

20. Which equation represents the proportional relationship in the table?

| x | y |
|-----|-------|
| 0 | 0 |
| 2 | -3 |
| 5 | -7.5 |
| 8 | -12 |
| 11 | -16.5 |

- A. $y = x - 4.5$ B. $y = x - 1.5$ C. $y = -1.5x$ D. $y = -4.5x$