



1 Select **all** tables that could represent a function.

A.

x	y
-4	8
-1	2
1	-3
4	9

D.

x	y
5	1
5	2
5	3
5	4

B.

x	y
0	3
2	3
4	5
6	5

E.

x	y
-3	0
-2	0
-1	0
0	0

C.

x	y
1	-1
3	-4
3	-6
7	-9



- 2 Grace and her brother need \$400 to go to band camp. Their parents have agreed to help them earn money by paying them \$25 each time they mow the lawn and \$10 for each hour they babysit their younger brother. They will have to do a combination of both chores to earn the money.

Select the equation that represents the number of lawns they can mow, m , and hours they can babysit, b , to earn \$400.

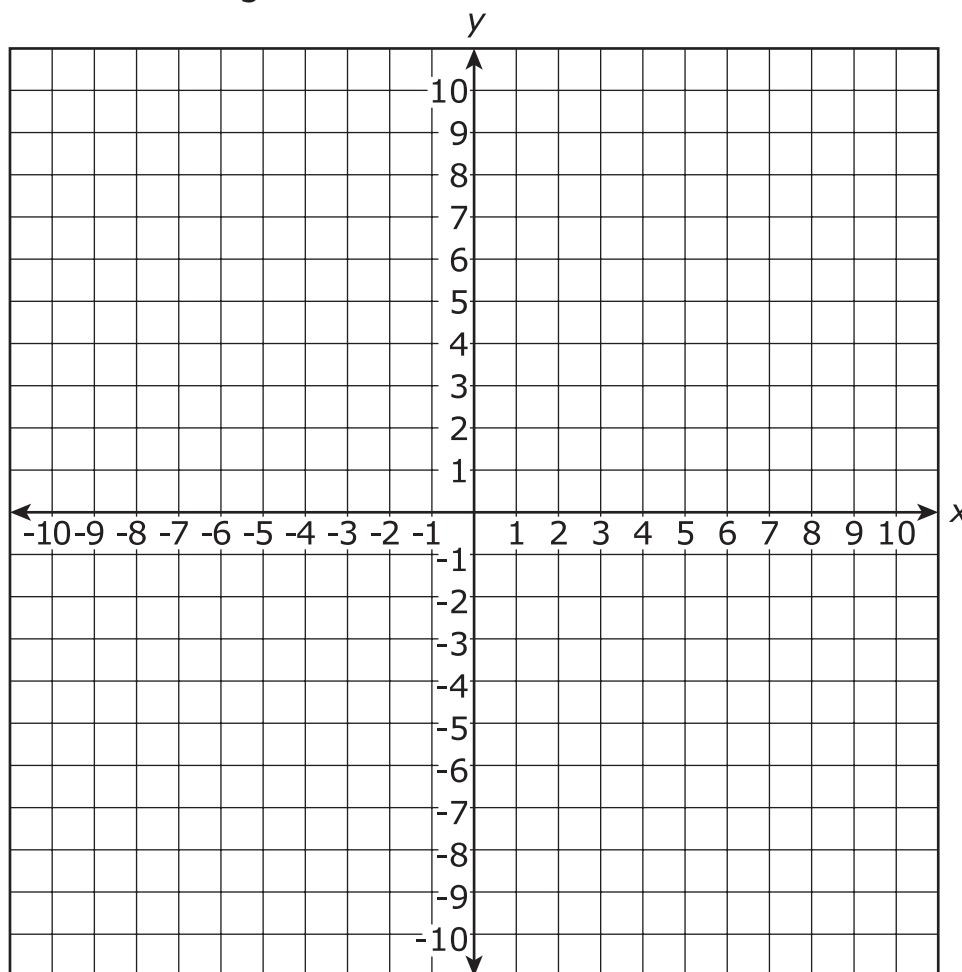
M. $10m + 25b = 400$

P. $10m - 25b = 400$

R. $25m + 10b = 400$

S. $25m - 10b = 400$

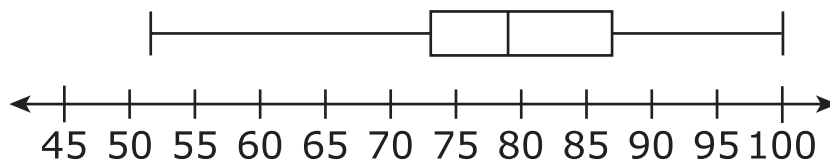
- 3 Graph the function $f(x) = \frac{2}{3}x + 4$.



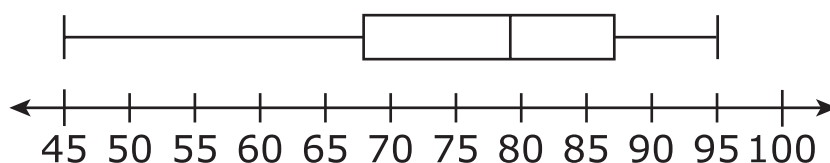


- 4 Two of Ms. Cole's Earth science classes have 23 students each. Box plots for recent test scores for these two classes are displayed.

Third Period



Fifth Period



Which statement about the scores is true?

- A. The means of the two sets of data are equal.
- B. The lower quartiles of the two sets of data are the same.
- C. More students in third period than in fifth period scored an 87 or above.
- D. Fewer students in third period than in fifth period scored a 70 or below.



- 5 A scientist uses the equation $p(t) = 2^{t+3}$ to model the growth of a bacteria, where t is the time, in hours, after the scientist begins the experiment.

Which equation is equivalent to the equation the scientist uses?

- M. $p(t) = 8(2^t)$
- P. $p(t) = 6(2^t)$
- R. $p(t) = 3(2^t)$
- S. $p(t) = 2(8^t)$

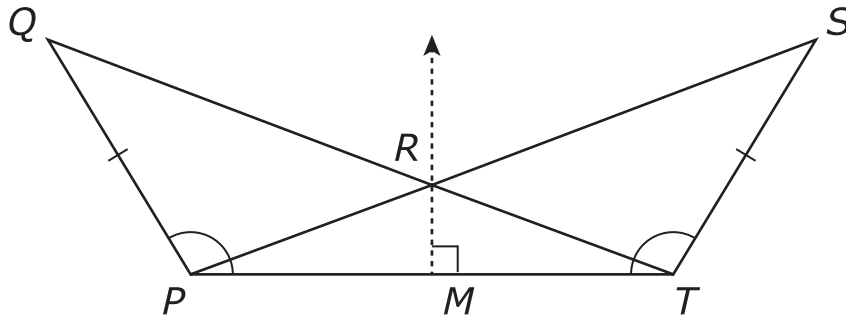
- 6 The balance of an account after t years can be found using the expression $6000(1.02)^t$ where the initial balance was \$6000.

By what percent does the account increase annually?

- A. 0.02%
- B. 1.02%
- C. 2%
- D. 102%



- 7 The triangles QTP and SPT are shown. Ray RM is the perpendicular bisector of line segment PT and intersects line segment PT at point M .



Which transformation would indicate that $\triangle QTP \cong \triangle SPT$?

- M. horizontal translation the length of \overline{PR}
 - P. horizontal translation the length of \overline{PT}
 - R. reflection over \overline{QT}
 - S. reflection over \overrightarrow{MR}
- 8 Triangle 1 is transformed to create Triangle 2 such that sides \overline{RS} , \overline{RT} , and \overline{ST} are congruent to sides \overline{VW} , \overline{VU} , and \overline{WU} , respectively.

Select the answers that correctly complete the following statement.

$\triangle RST$ must be congruent to $\triangle VWU$ because of the

- ASA
- SSS
- SAS
- AAS

theorem. Thus,

$\angle STR$ must be congruent to \angle

- UVW
- VWU
- WUV



- 9 Which pair **best** represents a causation relationship?
- A. a person's age and his/her shoe size
 - B. the number of ice cream cones sold and the amount of sunscreen sold
 - C. the temperature at a football game and the number of hot drinks sold
 - D. the number of people attending a ballgame and the length of the ballgame

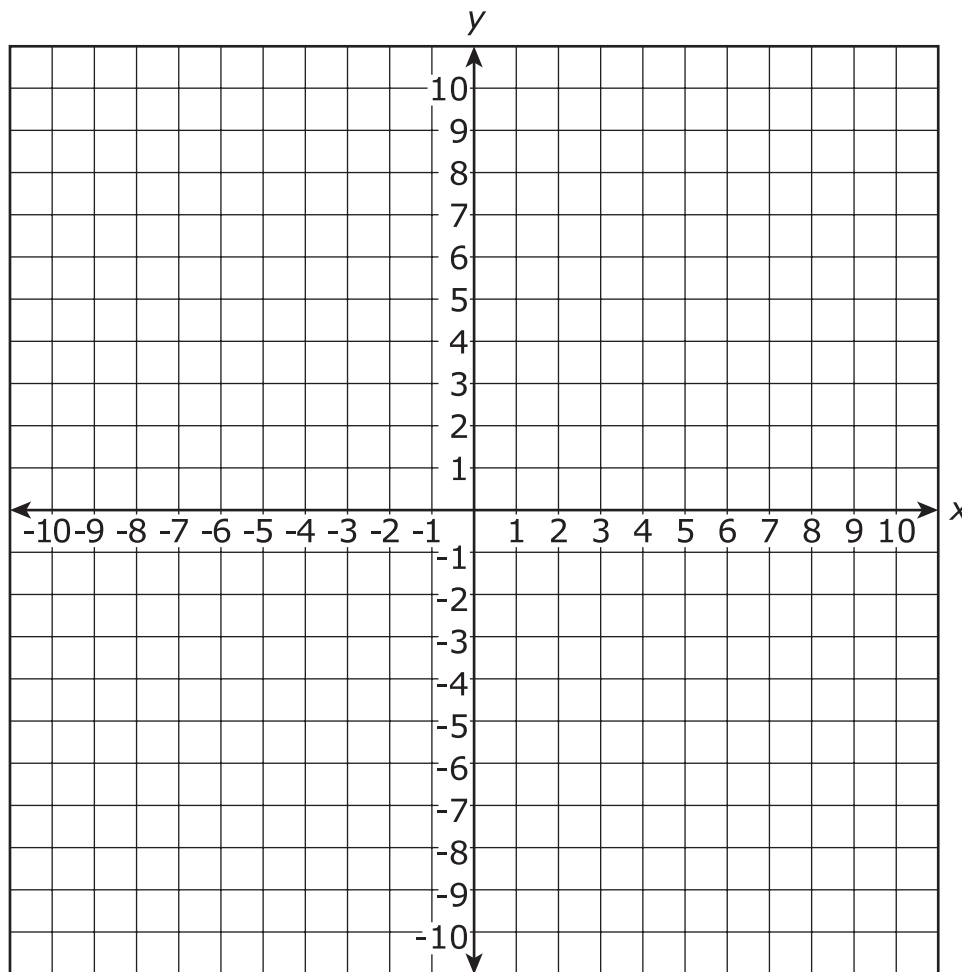


10 Two functions are shown.

$$f(x) = \frac{3}{2}x + 5$$

$$g(x) = 5x - 2$$

Determine the solution of the equation $f(x) = g(x)$. Plot the functions, $f(x)$ and $g(x)$, on the coordinate plane. Then, plot the point or points that show the solution of the equation $f(x) = g(x)$ on the coordinate plane.



**This is the end of Subpart 1 of the Integrated Math I Test.
Do not go on to the next page until told to do so.**