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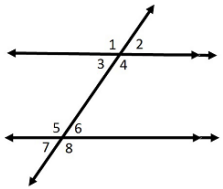
Which of the following is incorrect?



a. Same Side Exterior; $\angle 1$ and $\angle 7$; supplementary
b. Same Side Interior; $\angle 5$ and $\angle 3$; supplementary
c. Alternate Interior; $\angle 4$ and $\angle 5$; congruent
d. Alternate Exterior; $\angle 8$ and $\angle 5$; congruent
e. Corresponding; $\angle 3$ and $\angle 7$; congruent

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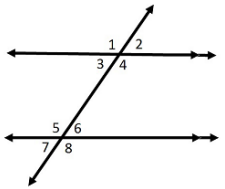
Which of the following is incorrect?



a. Corresponding; $\angle 4$ and $\angle 8$; congruent
b. Same Side Exterior; $\angle 1$ and $\angle 7$; supplementary
c. Alternate Interior; $\angle 4$ and $\angle 5$; congruent
d. Same Side Interior; $\angle 6$ and $\angle 7$; supplementary
e. Alternate Exterior; $\angle 7$ and $\angle 2$; congruent

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Give the slope of a line that is parallel to the line $-5x - 6y = 11$.

a. $-6/5$
b. $-5/6$
c. $-11/6$
d. $11/6$
e. $6/5$
f. $5/6$

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Give the slope of a line that is parallel to the line $-9x + 5y = -17$.

a. $-17/5$
b. $-5/9$
c. $5/9$
d. $-9/5$
e. $17/5$
f. $9/5$

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Give the slope of a line that is perpendicular to the line $3x - 5y = 13$.

a. $5 / 3$
b. $-5 / 3$
c. $13 / 5$
d. $3 / 5$
e. $-3 / 5$
f. $-13 / 5$

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Give the slope of a line that is perpendicular to the line $5x - 2y = -11$.

a. $-11 / 2$
b. $-5 / 2$
c. $5 / 2$
d. $-2 / 5$
e. $11 / 2$
f. $2 / 5$

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Write an equation of a line in point-slope form that is parallel to $y = -\frac{9}{4}x - 8$ and passes through point $(4, -15)$.

a. $y = \frac{4}{9}x + 6$
b. $y = -\frac{9}{4}x - 6$
c. $y = \frac{4}{9}x - 6$
d. $y = -\frac{9}{4}x + 6$

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Write an equation of a line in point-slope form that is parallel to $y = \frac{5}{3}x - 9$ and passes through point $(6, 3)$.

a. $y = -\frac{3}{5}x - 7$
b. $y = \frac{5}{3}x + 7$
c. $y = -\frac{3}{5}x + 7$
d. $y = \frac{5}{3}x - 7$

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Write an equation of a line in point-slope form that is perpendicular to $y = -\frac{9}{4}x + 5$ and passes through point (–9, 5).

a. $y = -\frac{9}{4}x + 9$

c. $y = -\frac{9}{4}x - 9$

b. $y = \frac{4}{9}x - 9$

d. $y = \frac{4}{9}x + 9$

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Write an equation of a line in point-slope form that is perpendicular to $y = \frac{1}{2}x - 2$ and passes through point (–12, 20).

a. $y = -2x + 4$

c. $y = \frac{1}{2}x - 4$

b. $y = -2x - 4$

d. $y = \frac{1}{2}x + 4$

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Write an equation of a line in point-slope form that is perpendicular to $-7x + 8y = -64$ and passes through point (–21, 15).

a. $y = -\frac{8}{7}x + 9$

c. $y = \frac{7}{8}x + 9$

b. $y = \frac{7}{8}x - 9$

d. $y = -\frac{8}{7}x - 9$

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Write an equation of a line in point-slope form that is perpendicular to $-3x + 4y = -20$ and passes through point (–6, –1).

a. $y = \frac{3}{4}x + 9$

c. $y = -\frac{4}{3}x - 9$

b. $y = -\frac{4}{3}x + 9$

d. $y = \frac{3}{4}x - 9$

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Write an equation of a line in point-slope form that is perpendicular to $-5x + 6y = -36$ and passes through point $(-15, 15)$.

a. $y = -\frac{6}{5}x - 3$

b. $y = \frac{5}{6}x + 3$

c. $y = -\frac{6}{5}x + 3$

d. $y = \frac{5}{6}x - 3$

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Write an equation of a line in point-slope form that is parallel to $-6x - 4y = -24$ and passes through point $(-16, 33)$.

a. $y = -\frac{3}{2}x - 9$

b. $y = \frac{2}{3}x + 9$

c. $y = -\frac{3}{2}x + 9$

d. $y = \frac{2}{3}x - 9$

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Write an equation of a line in point-slope form that is parallel to $6x - 2y = 18$ and passes through point $(-6, -26)$.

a. $y = -\frac{1}{3}x + 8$

b. $y = 3x - 8$

c. $y = 3x + 8$

d. $y = -\frac{1}{3}x - 8$

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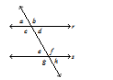
Which is a correct two-column proof?

Given: $r \parallel s$
Prove: $\angle b$ and $\angle h$ are supplementary.



a.

Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle c$	2. Vertical Angles
3. $\angle d$ and $\angle h$ are supplementary.	3. Alternate Interior Angles
4. $\angle d \cong \angle h$	4. Vertical Angles
5. $\angle b$ and $\angle h$ are supplementary.	5. Same-Side Interior Angles

b.

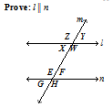
Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle h$	2. Corresponding Angles
3. $\angle c$ and $\angle e$ are supplementary.	3. Same-Side Exterior Angles
4. $\angle e \cong \angle h$	4. Vertical Angles
5. $\angle c$ and $\angle h$ are supplementary.	5. Substitution

c.

Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle c$	2. Vertical Angles
3. $\angle c$ and $\angle e$ are supplementary.	3. Same-Side Interior Angles
4. $\angle e \cong \angle h$	4. Vertical Angles
5. $\angle b$ and $\angle h$ are supplementary.	5. Substitution

d. none of these

Which is a correct two-column proof?
Given: $\angle H$ and $\angle X$ are supplementary.
Prove: $l \parallel n$



a.

Statements	Reasons
$\angle H$ and $\angle X$ are supplementary.	Given
$\angle H \cong \angle E$	Alternate Exterior Angles
$\angle G$ and $\angle Z$ are supplementary.	Substitution
$l \parallel n$	Same-Side Interior Angles Converse

b.

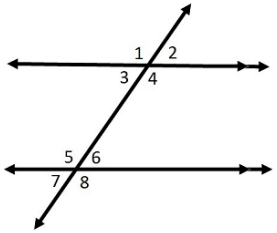
Statements	Reasons
$\angle H$ and $\angle X$ are supplementary.	Given
$\angle H \cong \angle E$	Vertical Angles
$\angle E$ and $\angle X$ are supplementary.	Same-Side Interior Angles
$l \parallel n$	Same-Side Interior Angles Converse

c.

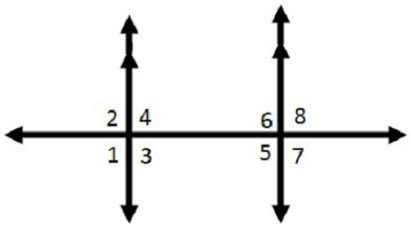
Statements	Reasons
$\angle H$ and $\angle X$ are supplementary.	Given
$\angle H \cong \angle E$	Vertical Angles
$\angle E$ and $\angle X$ are supplementary.	Substitution
$l \parallel n$	Same-Side Interior Angles Converse

d. none of these

In the image below; $m\angle 5 = (9x - 105)^0$, $m\angle 6 = (6x - 120)^0$, and $m\angle 7 = y^0$. Find the value of x.



In the image below; $m\angle 3 = (-2x + 105)^0$, $m\angle 5 = (8x + 33)^0$, and $m\angle 7 = y^0$. Find the value of y.



In the image below; $m\angle 7 = (-2x + 98)^0$, $m\angle 2 = (4x + 68)^0$, and $m\angle 2 = y^0$. Find the value of x.