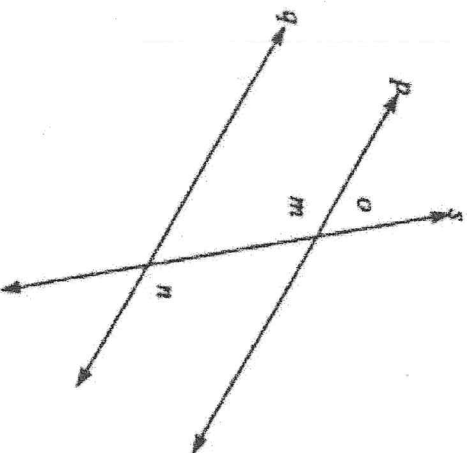7. Given: p and q are parallel lines
s is a transversal crossing lines p and q
o, m, and n are angles
$m+n = 230°$

What is the measure of angle o below?

A. 25°
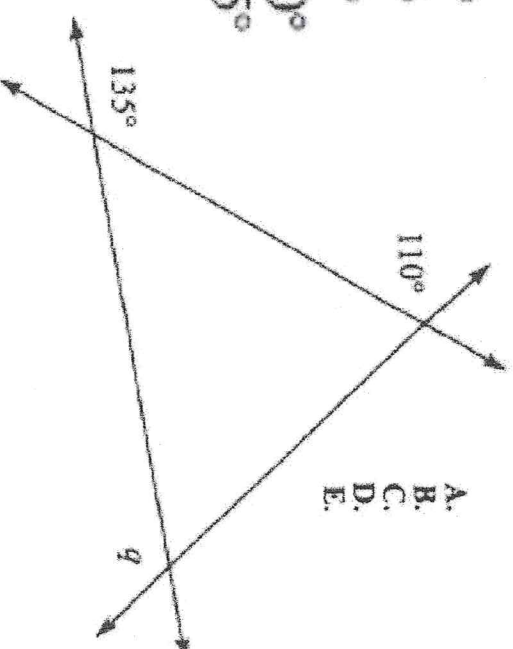B. 65°
C. 115°
D. 130°
E. 140°

10. In the figure below, where the triangle is created by 3 lines that intersect at the angles indicated, the measure of angle $q = ?$

A.
B.
C.
D.
E.

A. 45°
B. 65°
C. 70°
D. 110°
E. 115°

12. For all real numbers x and y, $(x-3y)^2 = ?$

A. $2x - 6y$
B. $x^2 - 6xy + 9y^2$
C. $x^2 - 9y^2$
D. $x^2 - 9x^2y^2 - 9y^2$
E. $x^2 + 9xy + 9y^2$

24. If $\dfrac{3\sqrt{7}}{x\sqrt{7}} = 3\sqrt{7}$ is true, then $x = ?$

A. 49
B. 21
C. 7
D. $\sqrt{7}$
E. 1

7. Given: p and q are parallel lines
s is a transversal crossing lines p and q
o, m, and n are angles
$m + n = 230°$

What is the measure of angle o below?

(handwritten annotations on figure)
o & m are supplementary
$\angle o = 180 - 115$
$\angle o = 65°$

Congruent $\angle s$
$m + n = 230$
$m = n = \frac{230}{2}$
$m = n = 115°$

A. 25°
B. 65°
C. 115°
D. 130°
E. 140°

10. In the figure below, where the triangle is created by 3 lines that intersect at the angles indicated, the measure of angle $q = ?$

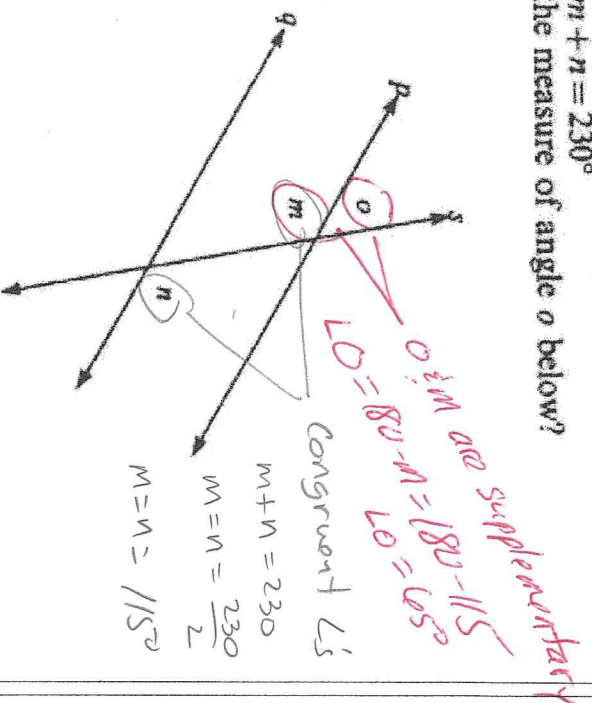*(handwritten annotations on figure)*
$180 - 110°$
$= 70°$
$180 - 135$
$= 45°$
$\angle q = 45 + 70$
$= 115°$

A. 45°
B. 65°
C. 70°
D. 110°
E. 115°

12. For all real numbers x and y, $(x - 3y)^2 = ?$

A. $2x - 6y$
B. $x^2 - 6xy + 9y^2$
C. $x^2 - 9y^2$
D. $x^2 - 9x^2y^2 - 9y^2$
E. $x^2 + 9xy + 9y^2$

(handwritten work)
$(x - 3y)(x - 3y)$

	x	$-3y$
x	x^2	$-3xy$
$-3y$	$-3xy$	$+9y^2$

$x^2 - 6xy + 9y^2 \leftarrow$
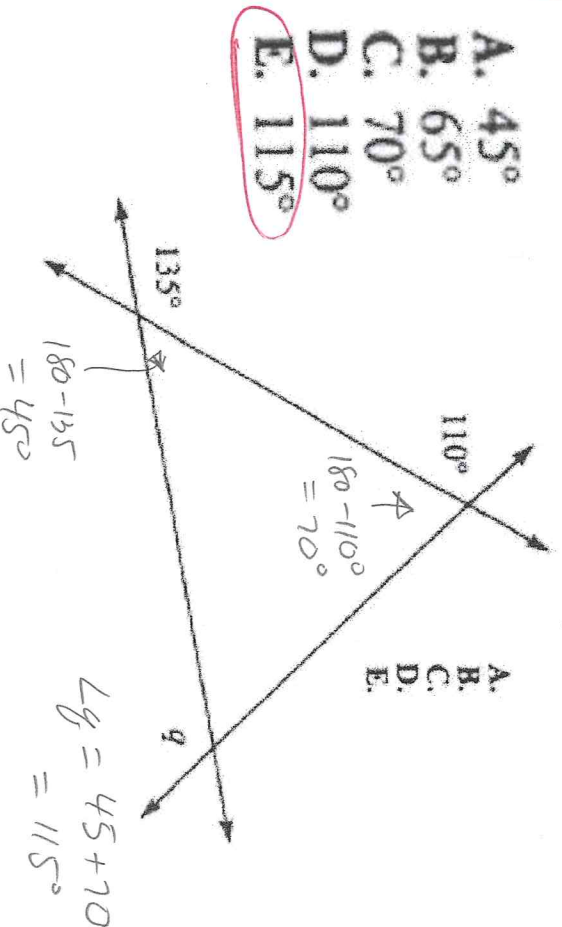
24. If $\dfrac{3\sqrt{7}}{7} = \dfrac{3\sqrt{7}}{x\sqrt{7}}$ is true, then $x = ?$

A. 49
B. 21
C. 7
D. $\sqrt{7}$
E. 1

(handwritten work)
$\dfrac{3\sqrt{7}}{7} = \dfrac{3\sqrt{7}}{x\sqrt{7}}$

Since the numerators are already equal the only way these two fractions could be equal is to have equal denominators too!

$\dfrac{7}{\sqrt{7}} = \dfrac{x\sqrt{7}}{\sqrt{7}}$

$x = \dfrac{7}{\sqrt{7}} \cdot \dfrac{\sqrt{7}}{\sqrt{7}} = \dfrac{7\sqrt{7}}{7}$

$x = \sqrt{7}$