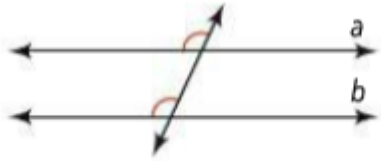
DAY 8 – 3.3 HOMEWORK

PAGE 160 #1-3, 7, 12-15, 17-27 ODD, 31

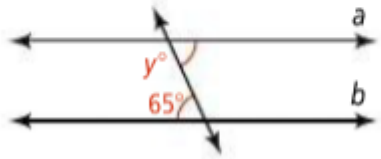
State the theorem or postulate that proves $a \parallel b$.

1.



If corr. $\angle$s $\cong \Rightarrow$ Lines $\parallel$

2.



If alt. int $\angle$s $\cong \Rightarrow$ Lines $\parallel$

3. What is the value of y for which $a \parallel b$ in Exercise 2?

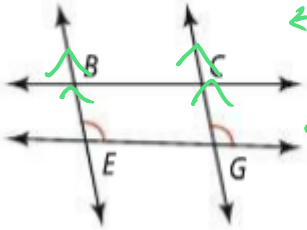
S.S. Int $\angle$s supp

$65 + y = 180$

$y = 115°$

Which lines or segments are parallel? Justify your answer.

7.

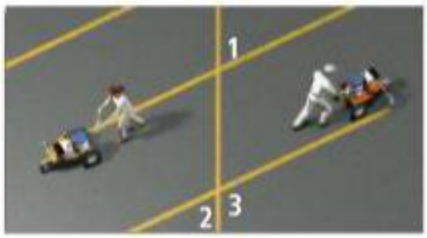


$\overleftrightarrow{BE} \parallel \overleftrightarrow{CG}$

B/C corr $\angle$s $\cong$

8.

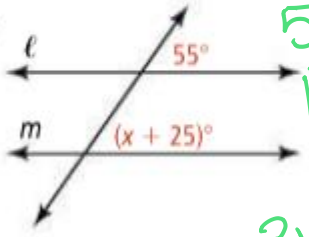
12. Parking Two workers paint lines for angled parking spaces. One worker paints a line so that $m\angle 1 = 65$. The other worker paints a line so that $m\angle 2 = 65$. Are their lines parallel? Explain.



yes! B/C alt. ext. $\angle$s $\cong \Rightarrow$ Lines $\parallel$

Algebra **Find the value of x for which $\ell \parallel m$.**

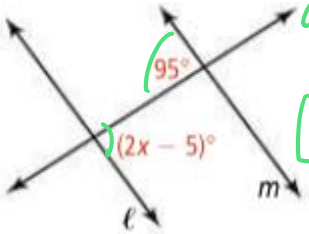
13.



$55 = x + 25$

$x = 30$

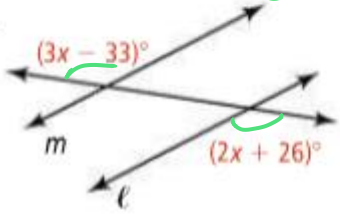
14.



$95 = 2x - 5$

$x = 50$

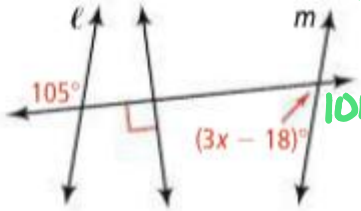
15.



$3x - 33 = 2x + 26$

$x = 59$

16.



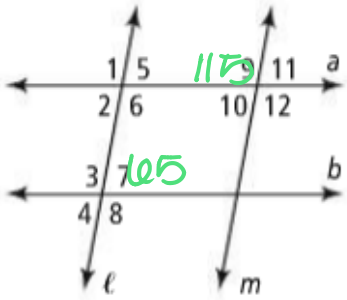
$3x - 18 = 105$

$x = 31$

105

ODDS ONLY ☺

Developing Proof Use the given information to determine which lines, if any, are parallel. Justify each conclusion with a theorem or postulate.



17. $\angle 2$ is supplementary to $\angle 3$. a||b s.s. int ∠s

18. $\angle 1 \cong \angle 3$

19. $\angle 6$ is supplementary to $\angle 7$. a||b s.s. int ∠s

20. $\angle 9 \cong \angle 12$

21. $m\angle 7 = 65, m\angle 9 = 115$ none!

22. $\angle 2 \cong \angle 10$

23. $\angle 1 \cong \angle 8$ a||b alt int ∠s ≅

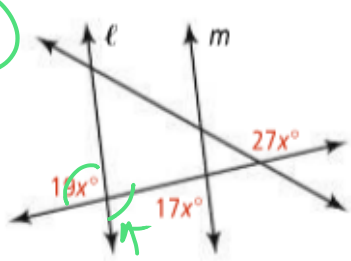
24. $\angle 8 \cong \angle 6$

25. $\angle 11 \cong \angle 7$ none

26. $\angle 5 \cong \angle 10$

Algebra Find the value of x for which $\ell \parallel m$.

27.



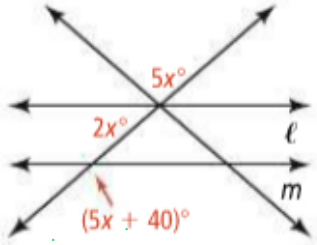
19x

s.s. int ∠s supp

$19x + 17x = 180$

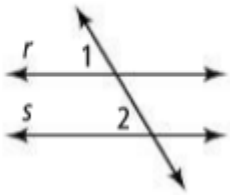
$x = 5$

28.



Algebra Determine the value of x for which $r \parallel s$. Then find $m\angle 1$ and $m\angle 2$.

31. $m\angle 1 = 80 - x, m\angle 2 = 90 - 2x$



corr ∠s ≅

$80 - x = 90 - 2x$

$x = 10$

$m\angle 1 = 80 - 10 = 70$

$m\angle 2 = m\angle 1 = 70$