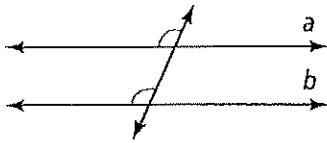


Proving Lines are Parallel

Name _____

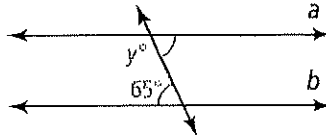
Block _____ Date _____

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



Theorem/Postulate:

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

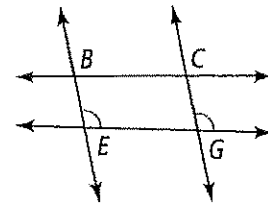


Theorem/Postulate:

What is the value of y in order for $a \parallel b$?

$y =$ _____

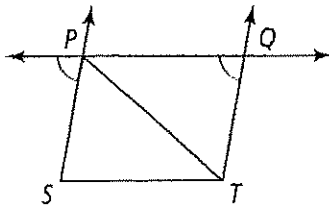
3. Which lines or segments are parallel? State the theorem or postulate that justifies your answer.



_____ \parallel _____

Theorem/Postulate:

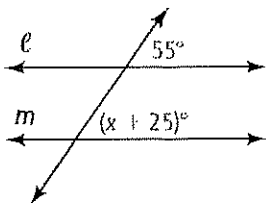
4. Which lines or segments are parallel? State the theorem or postulate that justifies your answer.



_____ \parallel _____

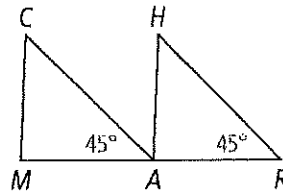
Theorem/Postulate:

7. Calculate the value of x for which $\ell \parallel m$.



$x =$ _____

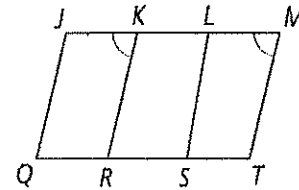
5. Which lines or segments are parallel? State the theorem or postulate that justifies your answer.



_____ \parallel _____

Theorem/Postulate:

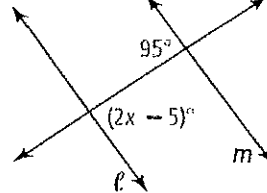
6. Which lines or segments are parallel? State the theorem or postulate that justifies your answer.



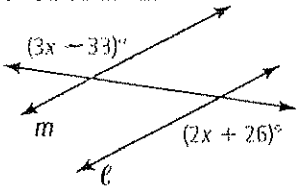
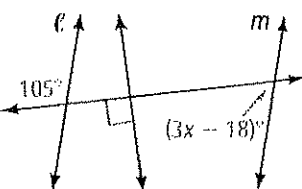
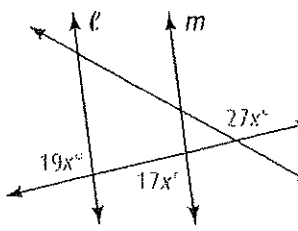
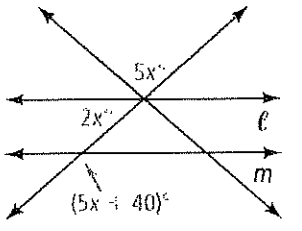
_____ \parallel _____

Theorem/Postulate:

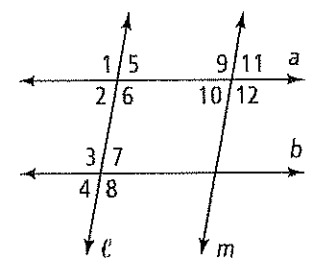
8. Calculate the value of x for which $\ell \parallel m$.



$x =$ _____

<p>9. Calculate the value of x for which $\ell \parallel m$</p>  <p style="text-align: right;">$x =$ _____</p>	<p>10. Calculate the value of x for which $\ell \parallel m$</p>  <p style="text-align: right;">$x =$ _____</p>
<p>11. Calculate the value of x for which $\ell \parallel m$</p>  <p style="text-align: right;">$x =$ _____</p>	<p>12. Calculate the value of x for which $\ell \parallel m$</p>  <p style="text-align: right;">$x =$ _____</p>

Using the sketch to the right, determine which lines, if any, are parallel. Justify each conclusion with a theorem or postulate. IF lines cannot be determined parallel, explain why.

<p>13. $\angle 2$ is supplementary to $\angle 3$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>		
<p>14. $\angle 1 \cong \angle 3$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>15. $\angle 9 \cong \angle 12$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>16. $\angle 6$ is supplementary to $\angle 7$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>
<p>17. $\angle 1 \cong \angle 8$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>18. $\angle 8 \cong \angle 6$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>19. $\angle 2 \cong \angle 10$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>
<p>20. $\angle 5 \cong \angle 10$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>21. $m\angle 7 = 65^\circ$ and $m\angle 9 = 115^\circ$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>	<p>22. $\angle 11 \cong \angle 7$</p> <p>_____ \parallel _____</p> <p>Why?</p> <p>_____</p>