

Name:

Using Parallel Lines and Transversals

Use your knowledge of parallel lines and transversals to solve the following.

A) Use the given figure for 1-2.

1. Find the value of y if:

$$m\angle 1 = 2y + 15^\circ$$

$$m\angle 4 = 75^\circ$$

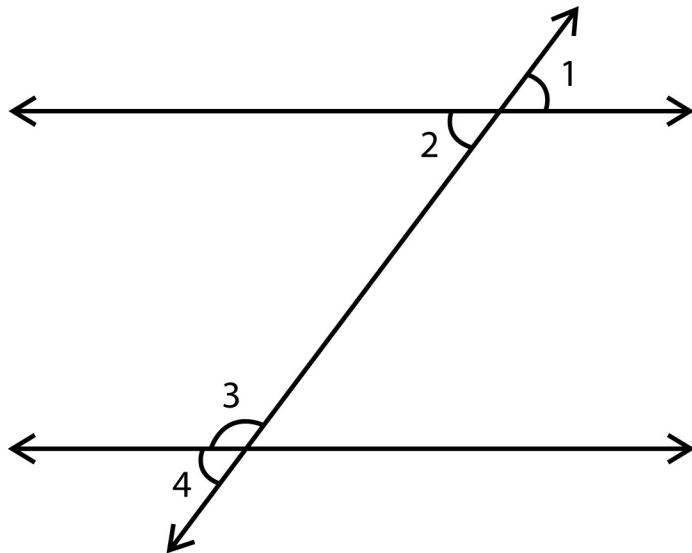
$$y = \underline{\hspace{2cm}}$$

2. Find the value of h if:

$$m\angle 2 = 3h - 35^\circ$$

$$m\angle 4 = h + 85^\circ$$

$$h = \underline{\hspace{2cm}}$$



B) Use the given figure for 3-5.

3. Find the value of z if:

$$m\angle 1 = z^2 + 45^\circ$$

$$m\angle 4 = 55^\circ$$

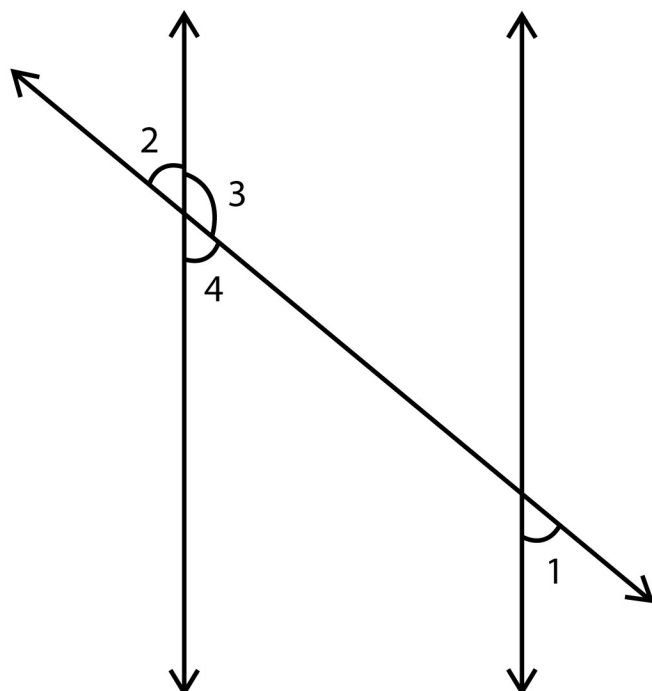
$$z = \underline{\hspace{2cm}}$$

4. Find $m\angle 2$.

$$m\angle 2 = \underline{\hspace{2cm}}$$

5. Find $m\angle 3$.

$$m\angle 3 = \underline{\hspace{2cm}}$$



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Answers

A) Use the given figure for 1-2.

1. Find the value of y if:

$$m\angle 1 = 2y + 15^\circ$$

$$m\angle 4 = 75^\circ$$

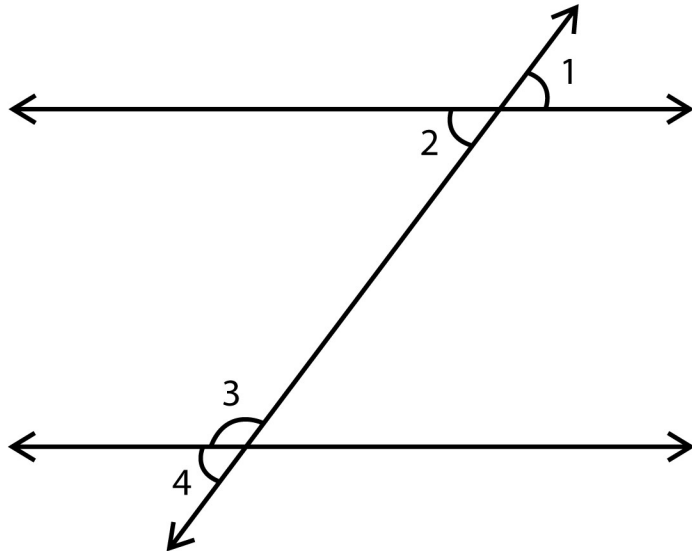
$$y = \underline{30^\circ}$$

2. Find the value of h if:

$$m\angle 2 = 3h - 35^\circ$$

$$m\angle 4 = h + 85^\circ$$

$$h = \underline{60^\circ}$$



B) Use the given figure for 3-5.

3. Find the value of z if:

$$m\angle 1 = z^2 + 45^\circ$$

$$m\angle 4 = 55^\circ$$

$$z = \underline{10^\circ}$$

4. Find $m\angle 2$.

$$m\angle 2 = \underline{55^\circ}$$

5. Find $m\angle 3$.

$$m\angle 3 = \underline{125^\circ}$$

