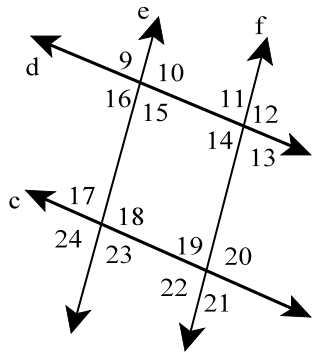
Parallel Lines and Transversals 3

Geometry

In the figures to the right a ∥ b, c ∥ d, and e ∥ f . The m∠19 = 80° and m∠5 = 72°. Find the measure of the given angle, and explain how you found it.



1) m∠4

2) m∠8

3) m∠12

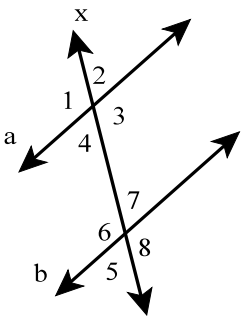
4) m∠23

5) m∠7

6) m∠24

7) m∠11

8) m∠2



For problems 9 - 16 use the same instruction as above except that m∠12 = 98° and m∠3 = 113° .

9) m∠21

10) m∠7

11) m∠16

12) m∠14

13) m∠5

14) m∠2

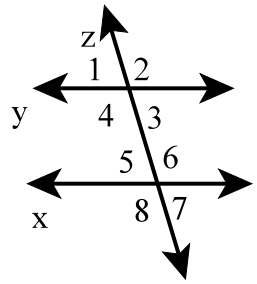
15) m∠8

16) m∠6

Use the information in each problem to tell whether any lines are parallel and, if they are, how we can tell.

17) ∠1 ≅ ∠5

18) ∠4 ≅ ∠6



19) ∠3 ≅ ∠8

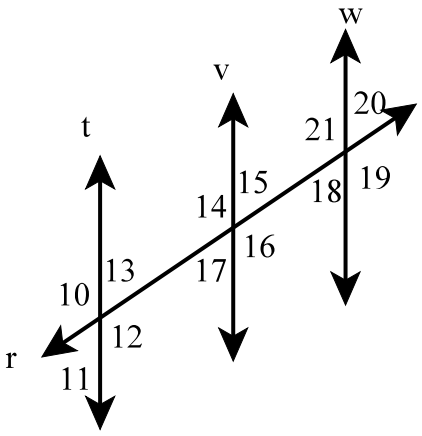
20) ∠1 ≅ ∠7

21) ∠13 ≅ ∠14

22) ∠15 ≅ ∠11

23) m∠10 + m∠20 =180°

24) ∠12 ≅ ∠21



25) ∠3 ≅ ∠7

26) m∠3 + m∠6 =180°

27) ∠13 ≅ ∠17

28) ∠14 ≅ ∠21

29) m∠4 + m∠8 =180°

30) ∠13 ≅ ∠18