**For #1-8, Find x to the nearest tenth. Assume that all segments that appear to be tangent are tangent.**

***\*\*Do all work on your own paper and draw diagrams\*\****

x-5

X+4

x

x-1

1. 2.)

3

6

x

10

2

x

12

6

1. 4.)

4

8

3

x

x

12

12

1. 6.)

5

9

x

8

x

2x2x2

X+4

x

1. 8.)

3x+5

$$\sqrt{174}$$

For #9-11 , Find each variable to the nearest tenth. Assume that segments that appear to be tangent are tangent.

q

16

2

r

18.5

15

1. 10. )

4

6

8

10

b

a

1.

d

9

c

11

15

1. An arch supports a pipeline across a river 20 m wide. Midway, the suspending

 cable is 5m long. Find the radius of the arch.

5

20

Answers:

1. $x=5$ 2. $x=\frac{1}{2}$ 3. $x=13$ 4. $x≈3.08$ 5. $x=\frac{56}{5}$ 6. $x≈7.42$

7. $x=6$ 8. $x≈7.15$ 9. $a=15, b=\frac{45}{4}$ 10. $r≈1.78, q=9$ 11. $c≈22.78, d≈16.91$

12) 12.5 m