Math 10

Lesson 7-2 Answers

**Lesson Questions**

**Question 1**

XY is the opposite side and YZ is the adjacent side, therefore we use the tan function.

**Question 2**

WX is the opposite side and VX is the adjacent side, therefore we use the tan function.

**Question 3**

**Question 4**

PR is the hypotenuse and PQ is the opposite side, therefore we use the sine function.

**Question 5**

JK is the hypotenuse and MJ is opposite the angle, therefore we use the sine function.

**Question 6**

The horizontal distance is adjacent to the angle and we are trying to find the hypotenuse, therefore we use the cosine function.

**Assignment**

1. a) 2.2 cm b) 2.8 cm c) 2.8 cm

2. a) 5.6 cm b) 4.1 cm c) 3.8 cm

3. 3.8 m

4. a)



b) 3.4 cm

5. 40.3 cm2

6. ∠QRT = ∠SRT = 26.5°, ∠QRS = 53.0°,

∠QPT = ∠SPT = 56.3°, ∠QPS = 112.6°,

∠RQT = ∠RST = 63.5°,

∠PQT = ∠PST = 33.7°,

∠PQR = ∠PSR = 97.2°,

∠PTQ = ∠PTS = ∠QTR = ∠RTS = 90.0°

PQ = PS =˙ 3.6 cm, QR = SR =˙ 6.7 cm

7. a) Approximately 38.7°

b) Approximately 63.4°

8. a) 25.3 cm b) 8.0 cm c) 7.7 cm d) 12.4 cm

9. 29.7 m

10. a) 48.3 m

b) The surveyor could use the tangent ratio or the Pythagorean Theorem.

11. 4.0 km

12. 2813 m

13. a) i) 21.0 cm ii) 15.1 cm

14. 186 mm