

Chapter 2 Exam Review

P. 124-126

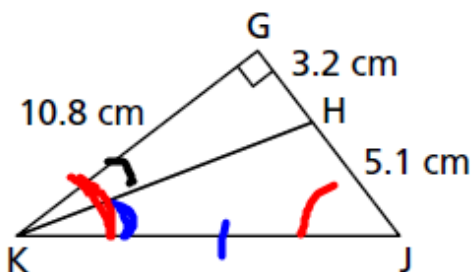
1, 3, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16, 18, 20, 22, 23

Worked out solutions to the above questions can be found in the link at the top of the chapter 2 page in the Math 10 link on Mr. Houk's weebly site.

22. In the diagram below, determine each measure.

- a) KJ b) HK c) $\angle HKJ$

Give the measures to the nearest tenth.



a)

$$(KJ)^2 = (10.8)^2 + (8.3)^2$$

$$(KJ)^2 = 185.33$$

$$KJ = 13.6 \text{ cm}$$

$$\angle KHJ = 21^\circ$$

$$b) (KH)^2 = (10.8)^2 + (3.2)^2$$

$$(KH)^2 = 126.88$$

$$KH = 11.3 \text{ cm}$$

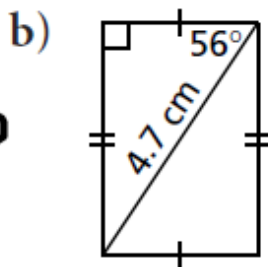
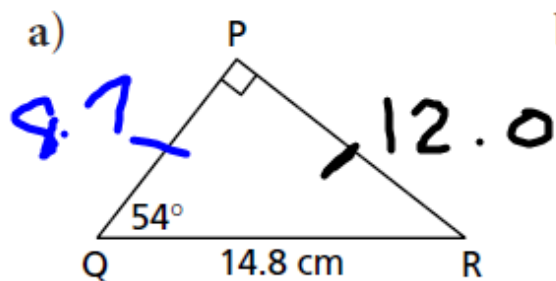
c) $\angle GKJ$

$$\tan K = \frac{8.3}{10.8} = 37.5^\circ$$

$\angle GKH$

$$\tan GKH = \frac{3.2}{10.8} = 16.5^\circ$$

20. Determine the perimeter and area of each shape. Give the measures to the nearest tenth.



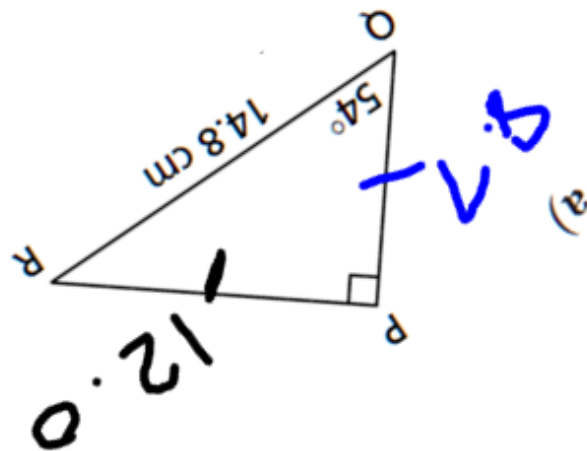
$$\sin 54^\circ = \frac{PR}{14.8}$$

$$PR = 12.0$$

$$\cos 54^\circ = \frac{PQ}{14.8}$$

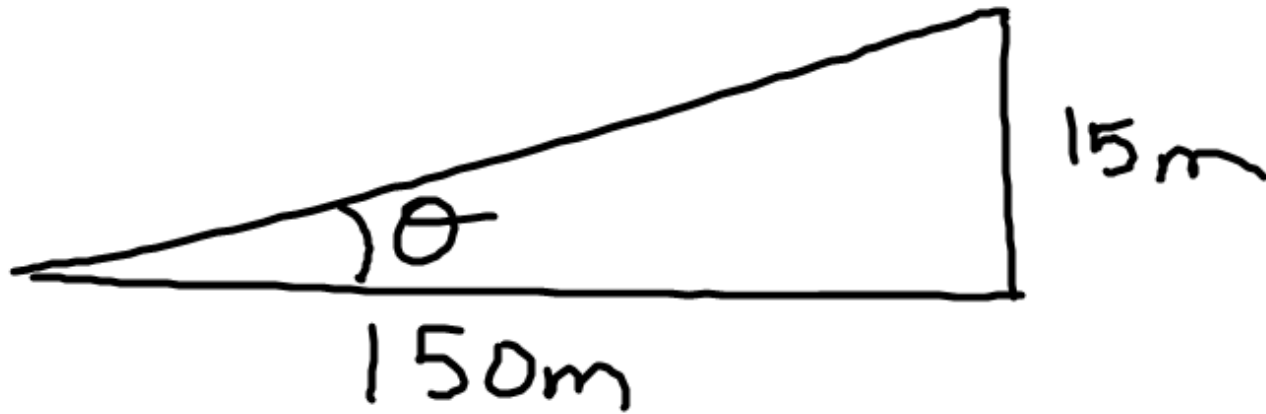
$$PQ = 8.7$$

$$\begin{aligned} \text{Perim} &= 14.8 + 12 + 8.7 \\ &= 35.5 \text{ cm} \end{aligned}$$



$$\begin{aligned} A &= \frac{1}{2} (8.7)(12) \\ &= 52.2 \text{ cm}^2 \end{aligned}$$

3. A road rises 15 m for each 150 m of horizontal distance. What is the angle of inclination of the road to the nearest degree?



$$\tan \theta = \frac{15}{150}$$

$$\theta = \tan^{-1} \left(\frac{15}{150} \right)$$

$$\theta = 5.7^\circ$$