

Evaluate, use a calculator.

- (7.) $\csc 52 = 1.269$ use calculator
(8.) $\cot 80 = 0.1763$ use calculator
(9.) $\sec 40 = 1.3054$ use calculator
(10.) $\cot 10 = 5.671$ use calculator
(11.) $\sec 73 = 3.4203$ use calculator
(12.) $\csc 15 = 3.8637$ use calculator
(13.) $\cot 110 = -0.36397$ use calculator
(14.) $\sec 245 = -2.3662$ use calculator
(15.) $\csc 340 = -2.9238$ use calculator

Evaluate the six trig functions given the terminal point.

(23.) $P(-24, 7)$

(i.) $a^2 + b^2 = c^2$ use the pythagorean theorem

$(-24)^2 + (7)^2 = c^2$ make substitutions

$576 + 49 = c^2$ multiply

$c^2 = 625$ combine like terms

$c = 25$ take square roots

(ii.) $\sin P = 7/25$

$\cos P = -24/25$

$\tan P = -7/24$

$\csc P = 25/7$

$$\sec P = -25/24$$

$$\cot P = -24/7$$

(24.) $P(4, -5)$ here is the problem

(i.) $a^2 + b^2 = c^2$ use the pythagorean theorem

$$(4)^2 + (-5)^2 = c^2 \quad \text{make substitutions}$$

$$16 + 25 = c^2 \quad \text{multiply}$$

$$c^2 = 41 \quad \text{combine like terms}$$

$$c = \sqrt{41} \quad \text{take square roots}$$

$$(ii.) \quad \sin P = -5/\sqrt{41}$$

$$\cos P = 4/\sqrt{41}$$

$$\tan P = -5/4$$

$$\csc P = \sqrt{41}/5$$

$$\sec P = \sqrt{41}/4$$

$$\cot P = -4/5$$

(25.) $(-5, -12)$ here is the problem

(i.) $a^2 + b^2 = c^2$ use the pythagorean theorem

$$(-5)^2 + (-12)^2 = c^2 \quad \text{make substitutions}$$

$$25 + 144 = c^2 \quad \text{multiply}$$

$$c^2 = 169 \quad \text{combine like terms}$$

$$c = 13 \quad \text{take square roots}$$

(32.) $\sec A = 1.187$

here is the problem

$\cos A = 0.84246$

take reciprocals

$A = 32.6$

take the arccos of each side

(33.) $\csc A = 1.122$

here is the problem

$\sin A = 0.8912$

take reciprocals

$A = 63$

take the arcsin of each side